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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

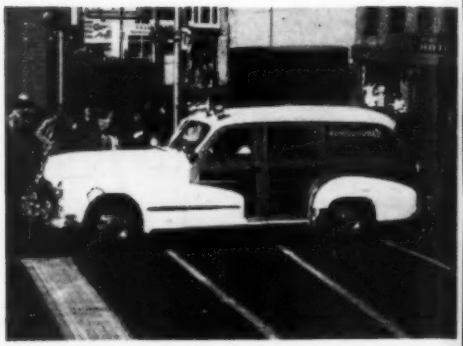
SEPTEMBER, 1952

Heavy foam streams are brought into play in checking fire involving B-36 bomber which crashed at Fort Worth, Tex., on August 8. Seven men were injured but none was killed.

A CASE · SHEPPERD · MANN PUBLICATION

EMERSON PROTECTION

Christiansburg Life Saving and First Aid Crew



Clifton Forge Fire Department Rescue Squad

Bristol Life Saving Crew

Williamson Road Life Saving Crew

Hunton First Aid and Rescue Squad

Altavista Life Saving and First Aid Crew

More of the rescue cars in the parade of the International Rescue and First Aid Association at its 1951 convention.

Do you, too, carry an Emerson to protect the lives of your men and your community?

EMERSON RESUSCITATORS **EMERSON IRON LUNGS**

J. H. EMERSON COMPANY

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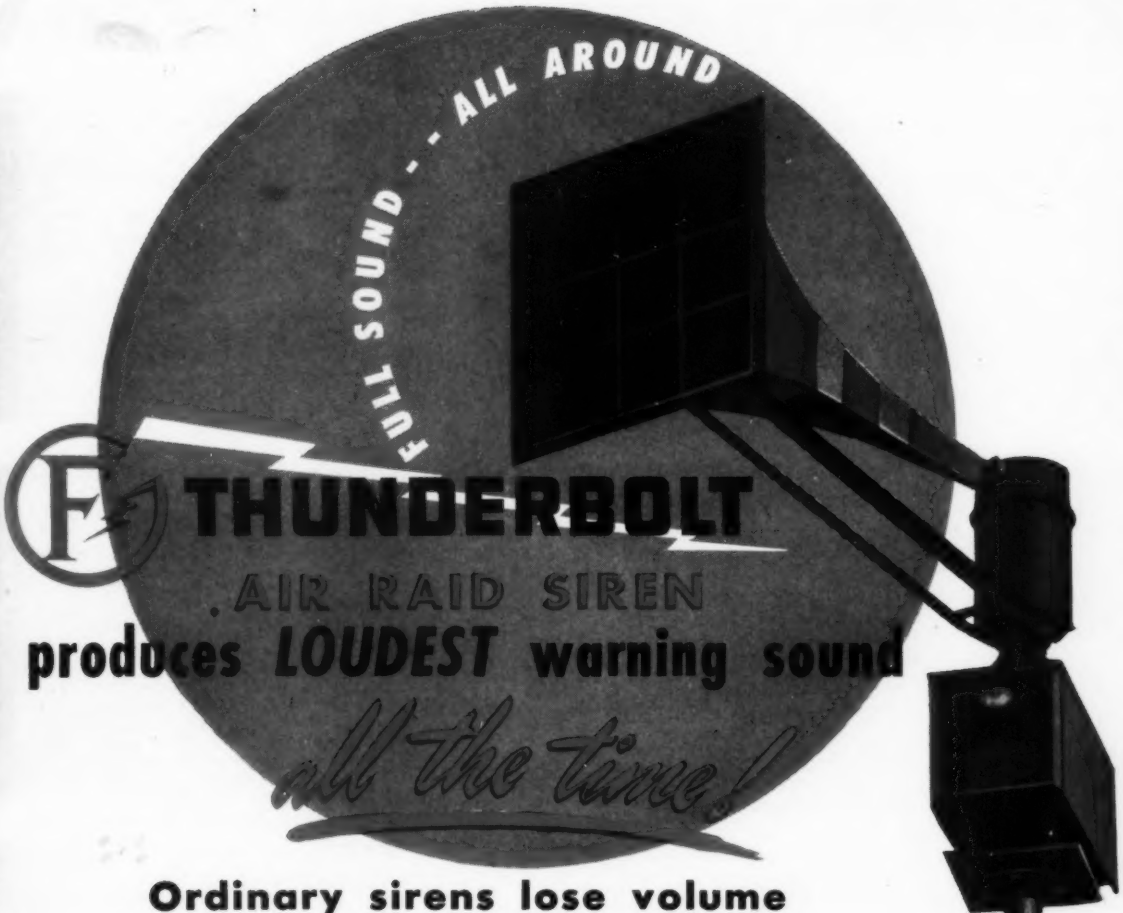

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Ordinary sirens lose volume as pitch drops . . .

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING. THE FIRE ENGINEER. FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

YEAR by year the fire service of this country is growing more in importance. Year by year the duties of our firemen are becoming more arduous, more exacting, more dangerous, and of greater value to the public in general.

● You will go along with that statement, won't you? Yet it was written 74 years ago this month! It was written by Clifford Thompson, editor of the National Fireman's Journal, forerunner of FIRE ENGINEERING.

● For three quarters of a century the fire service has continued to grow in stature, in importance, justifying the contention of editors who, even "way back when," had vision, knowledge of and regard for the fire service.

● It will continue to grow just so long as destructive fire remains "Enemy No. 1" of our nation, and just as long as the public realizes that the only way fire can be controlled is by keeping the nation's fire service alive, alert—and giving it the facilities it needs to work with.

● The "horseless" fire engine; the radio —even the telephone as we know it, together with such modern innovations as water fog, fog-foam, wet water, portable power and light plants, self-breathing respiratory protective equipment, all-metal, all-power-operated aerial ladders—these were as yet undreamed of, in Clifford Thompson's day.

● Where will we be tomorrow? How well will the fire service keep abreast of —or ahead of the fires of the Chemical, the Atomic Era in which we live? What new tools, new techniques await us just around the corner—and in the next three-quarters of a century?

● One thing is certain: the publication that has been the "Journal of the Fire Profession Since 1877" will continue to provide the best answers to these questions for the next 75 years!

P.S. That August 1952 Convention Issue of FIRE ENGINEERING is the largest in all its long life!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.50 a year; Foreign, $4.50; Single copies, 40c. ¶Member of Audit Bureau of Circulations and Associated Business Publications, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 5, 1879.

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DOUBLE SURFACE FIRE HOSE

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1869 AND HOOK CONE 1952

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JOHN BEAN HPV Fire Fighters

GET TWICE the fire protection from one truck, with the sensational John Bean HPV Fire Fighter that delivers approved full volume plus high-pressure fog. Two independent pumps, which can be operated separately or together, make the HPV truly two fire fighters in one.

You can hit fires fast and hard with John Bean true, high-pressure fog. Carrying 600 gallons of water, the HPV is always ready for instant action upon arrival at a fire. Where street mains, ponds, or other outside sources of water are available, you can add the slugging firepower of Underwriters'-approved volume streams.

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NEW Volume Pumps Deliver Underwriters'-approved Streams at 500 GPM, 600 GPM, or 750 GPM

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RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

Chief Barry watches Lt. C. J. Girvan (at left) lift coil of Fire King.

Utica finds B.F.Goodrich hose easy to coil, light to carry

TAKE the word of a well-known authority on fire-fighting methods, Chief Leo R. Barry, of the Utica, N. Y., Central Fire Station. He says, "We've been using B. F. Goodrich Fire King hose for several years now, and wouldn't be without it. We noticed right away how much lighter it is than the hose we had been using. The boys like that, and also the fact that Fire King is the easiest hose to handle and coil we've ever had."

Fire King hose *is* 15% lighter, much more flexible because of a recently-developed, chemically-produced fiber, which is used exclusively in Fire King as "filler cords"—the reinforcing cords that go *around* the hose and carry the load under pressure. Compared with cotton filler cords used in other hose, this new fiber has three times the strength for the same weight of cord.

Stands higher pressures—Actual service tests prove that Fire King, tested to 600 lbs. pressure, is 50% stronger than standard fire hose which is tested to only 400 lbs. pressure.

100% more strength in coupling area—The coupling area is the danger zone in fire hose. That's where, in ordinary hose, cracks and blowouts occur, due to pressure, flexing, strain. In BFG hose this cause of hose failure has been eliminated by adding an extra layer of hard-woven cords that extends 12" back from the coupling. Not one single length of B. F. Goodrich hose with patented end-protection has ever failed in the coupling area.

Before you buy another length of fire hose, let your nearby BFG Fire Hose Distributor show you a sample of Fire King and quote on your requirements. You'll find that although the initial cost of Fire King is slightly higher, it's really your most economical buy because it lasts longer. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich

Helping You Cut Fire Losses

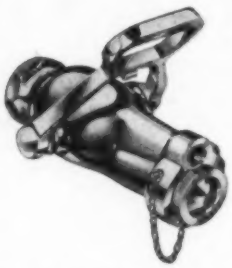
As leading manufacturers of fire fighting equipment, Rockwood makes many products that contribute vitally to the quick extinguishment or effective control of all kinds of fires. On this page are representative Rockwood products that daily play a vital role in fire protection programs throughout the nation.

For further details on these products, and many, many others, write for your free copy of the Rockwood Catalog, "Fire Fighting Products." ROCKWOOD SPRINKLER COMPANY, 54 HARLOW STREET, WORCESTER 5, MASS. Distributors in all principal cities.

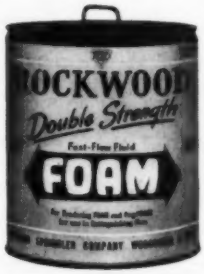
ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

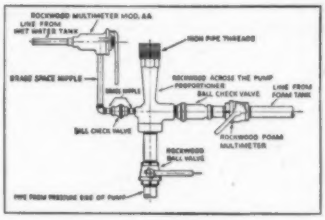


Type SG-48 WaterFOG Nozzle. Easy to handle. Discharges high or low velocity WaterFOG or straight water stream.



Double Strength Foam Liquid for fire hose line Nozzles and permanently piped FogFOAM and FOAM installations.

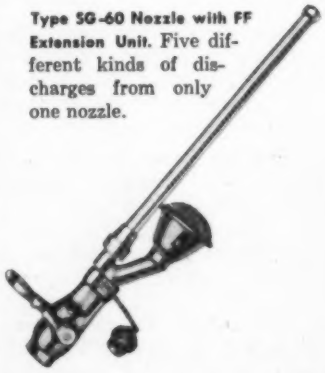
Type FFF FogFOAM Nozzle. Discharges FogFOAM, Solid FOAM stream, and High Velocity WaterFOG.



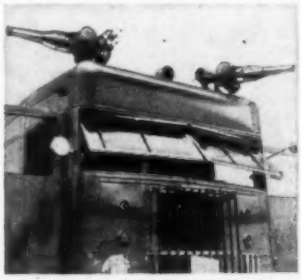
Proportioning systems. Used when pressure is maintained by pump. Custom-engineered systems also available.

Foam Eductor. Introduces FOAM liquid into hose lines. Used with Type FFF FogFOAM Nozzles.

High Capacity WaterFOG Nozzle. Quickly controls and extinguishes large fires in buildings and flammable liquids.



Type SG-60 Nozzle with FF Extension Unit. Five different kinds of discharges from only one nozzle.



Hydraulically or Manually Controlled Type FFF FogFOAM Turret Nozzle for airport crash fire fighting trucks and others.

IT'S TOPS

. . . the noticeably better performance of American Fire Hose is the natural result of skillful, painstaking manufacture. American does not compromise with quality—as a result critical buyers eventually standardize on American.

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SMOOTH WATERWAY . . . lowest possible friction loss.

DEPENDABLE . . . unsurpassed for ruggedness and long life.

LOWEST COST PER FOOT PER YEAR

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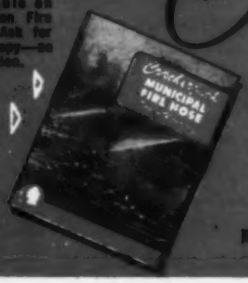
Descriptive literature is available on American Fire Hose. Ask for your copy—no obligation.



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First announcement that Americans would willingly fight for freedom came with the ringing of the Liberty Bell atop Independence Hall, 176 years ago.

Today, as more and more cities and towns observe Civil Defense precautions, American determination to defend that freedom sounds forth regularly in the mighty voice of Chrysler Air Raid Sirens.

Thanks to the 180 horsepower and unusual operating characteristics of the great new Chrysler Industrial V-8 Engine, sound engineers now have made available the loudest and most practical siren ever devised for civil defense purposes.

At 100 feet from its throat, the Chrysler Siren delivers 138 decibels of sound. Under normal conditions, its shrill voice carries *four miles*, thus making it possible to warn all persons in an approximate circular area, eight miles in diameter. Because of the great power of Chrysler Sirens, complete coverage of any desired area can be accomplished with fewer sirens, and at lower cost.

By ingenious utilities' circuits, defense organizations can operate a system of Chrysler Sirens by remote control from a central control station. When desired, the sirens can also be operated manually at the site.

Since each Chrysler Siren is individually powered, it operates independently of central power systems, an obvious advantage in case of attack. For mobility, Chrysler sirens can be mounted on trucks or boats.

To secure complete information, specifications and availability for your city, write Siren Layout Service, ***Industrial Engine Division, Chrysler Corporation, Trenton, Michigan.***

Civil Defense is a common need, shared by all. Join the Civil Defense group in your area.

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AIR RAID SIREN

amous Indians

or half a century the cigar store Indian
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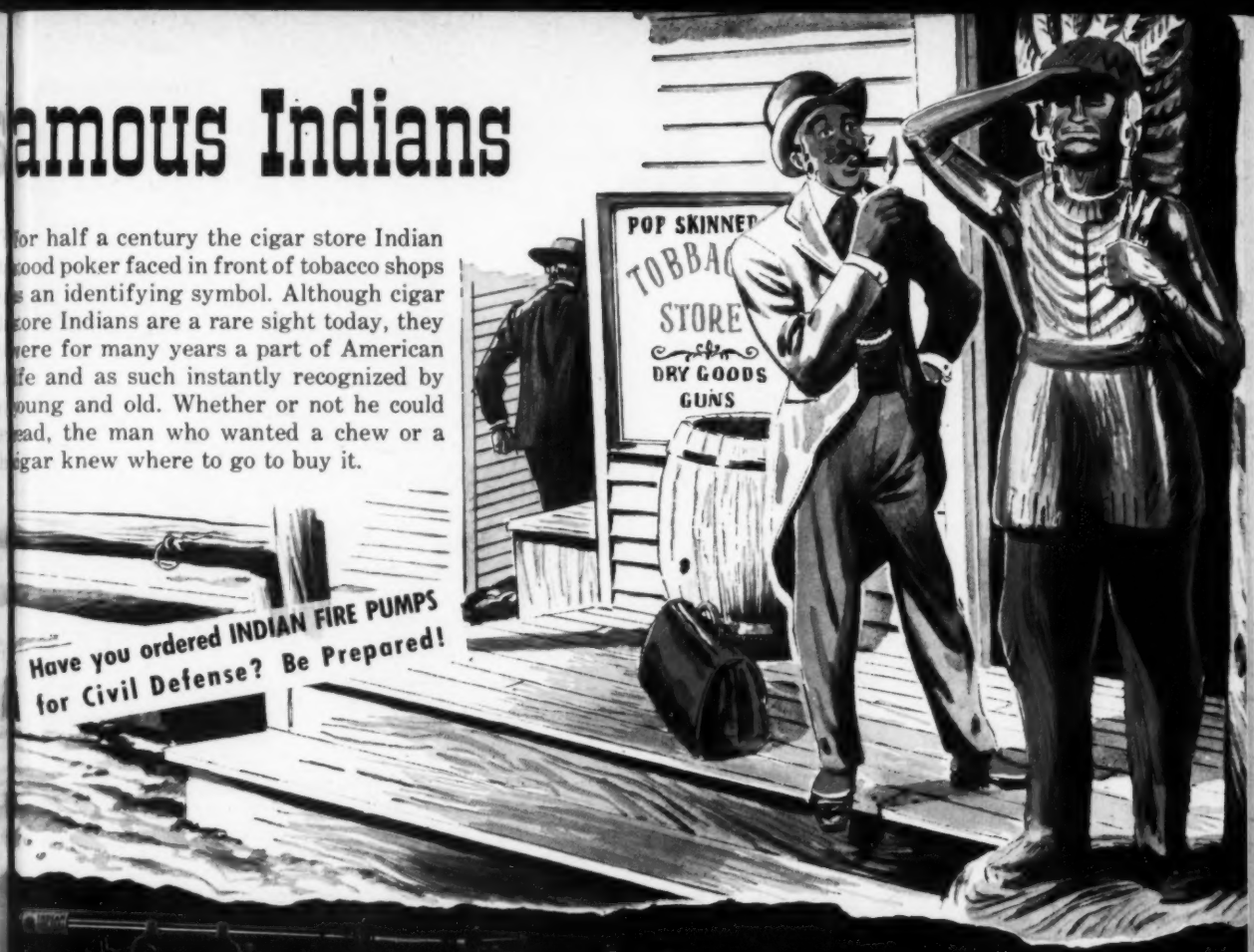
s an identifying symbol. Although cigar
ore Indians are a rare sight today, they
ere for many years a part of American
fe and as such instantly recognized by
oung and old. Whether or not he could
ead, the man who wanted a chew or a
igar knew where to go to buy it.



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INDIAN FIRE PUMPS

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The portability, capacity and all 'round efficiency of INDIAN FIRE PUMPS makes them ideally suited for putting out small fires before they spread into big ones. Clear water alone does the job. How is *your* supply of INDIAN FIRE PUMPS? Do you have an ample supply for *any* emergency? Order *now*. We will ship promptly.

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posal, burning right
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kfiring work.

Smith INDIAN Drinking Water and Supply Tank

For carrying drinking water to fire fighting crews, and refilling Indian Fire Pumps. 5-gal. capacity. Push button faucet. Carries by handle or slung on back.

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real fire-fighting power

-plus PRACTICAL ECONOMY

just off the press — GET YOUR COPY!

You get both with the BARTON-AMERICAN FRONT-MOUNTED PUMP

LOOKING FOR THE MOST fire-protection for the money—*without* sacrifice of top-quality in materials and workmanship? Then you'll want to investigate the unique advantages you can get with a Barton-American UA Type Front-mounted Pump!

THIS NEW BULLETIN—(just off the press)—shows *point-by-point* the reasons why a powerful, precision-built, gear-driven UA Pump costs less to build and install on any chassis you select. It shows how you can fight fires while the truck is moving—with high-pressure straight streams or famous Barton Super-Fog Guns.

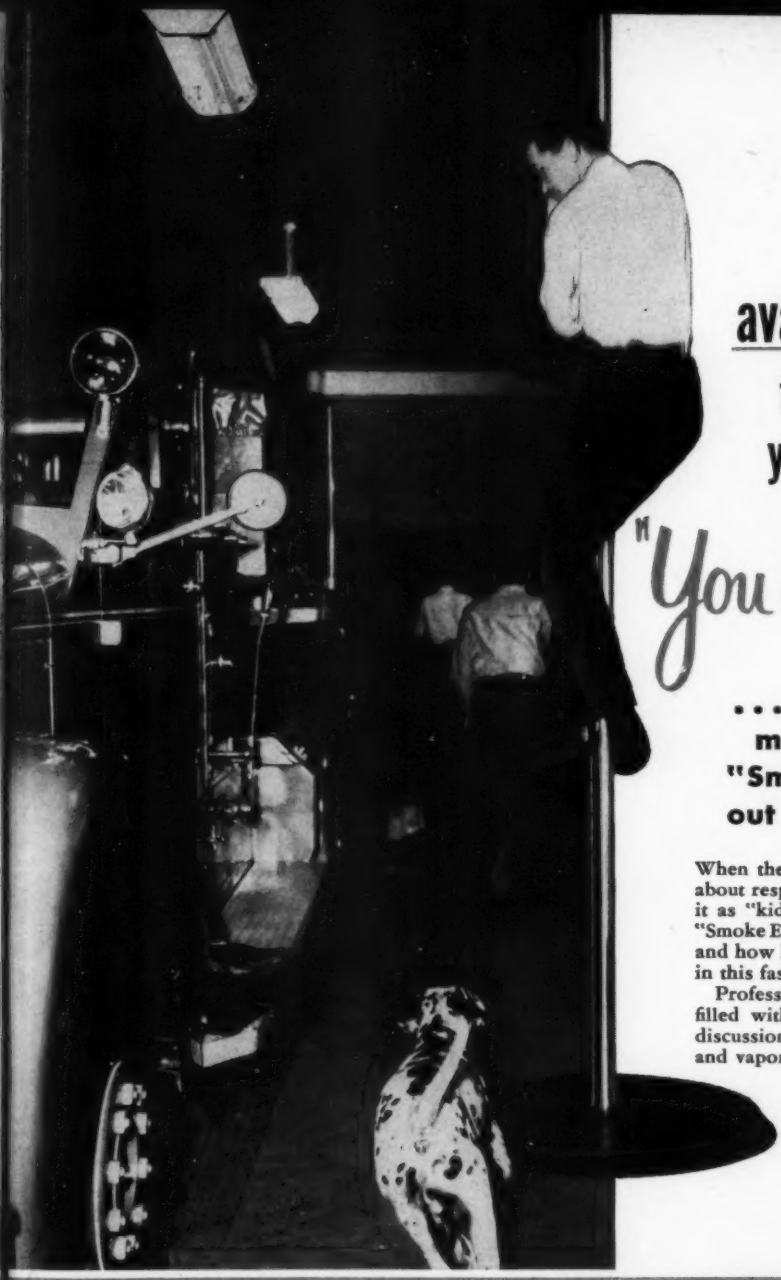
IT SHOWS HOW you can carry more water or equipment—on a chassis that's better balanced for the road—than with other pumps. And it gives details on our exclusive Service-Pump Plan—an extra assurance that your community will *always* have continuous fire protection! There are many other points to consider, so—

WRITE TODAY FOR YOUR COPY OF NEW UA PUMP BULLETIN 8330-A

AMERICAN-MARSH PUMPS

BATTLE CREEK, MICHIGAN

CANADIAN PLANT:
American-Marsh Pumps (Canada) Ltd., Stratford, Ontario, Canada



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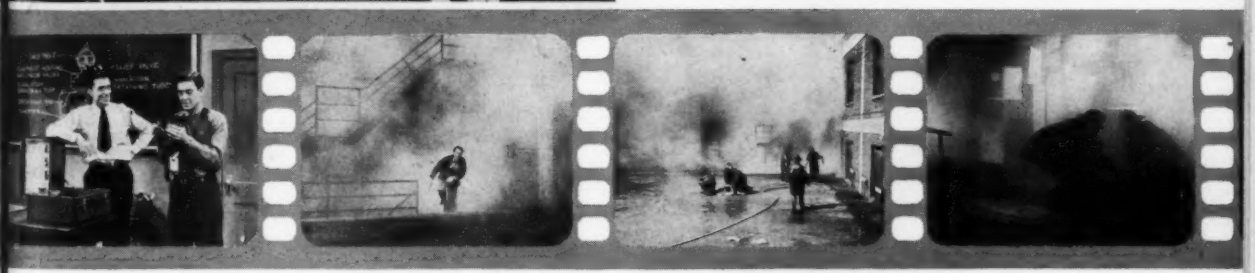
"You Bet Your Life"

. . . an educational sound motion picture about a "Smoke Eater" who found out too late he was wrong

When the boys at the station house started talking about respiratory protection, "Chop Happy" classed it as "kid's stuff" and refused to listen. He was a "Smoke Eater" and that's all there was to it. His story, and how he bet his life and lost, is dramatically told in this fast-moving, authentic sound motion picture.

Professionally produced, "You Bet Your Life" is filled with action-packed scenes, attention-holding discussions on the harmful effects of smoke, gases, and vapors, and educational demonstrations of fire-fighting masks and their uses . . . ideal material for training classes and refresher instruction for veterans.

This 16 mm., sound film is non-commercial. Plan now for a free showing to your department. You'll find it a profitable way to spend the 25 minutes it takes for a showing. Clip coupon at bottom of ad and mail today!



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the M.S.A. man on your every safety problem . . . his job is to help you.

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Please arrange to send the film—"You Bet Your Life" for showing about
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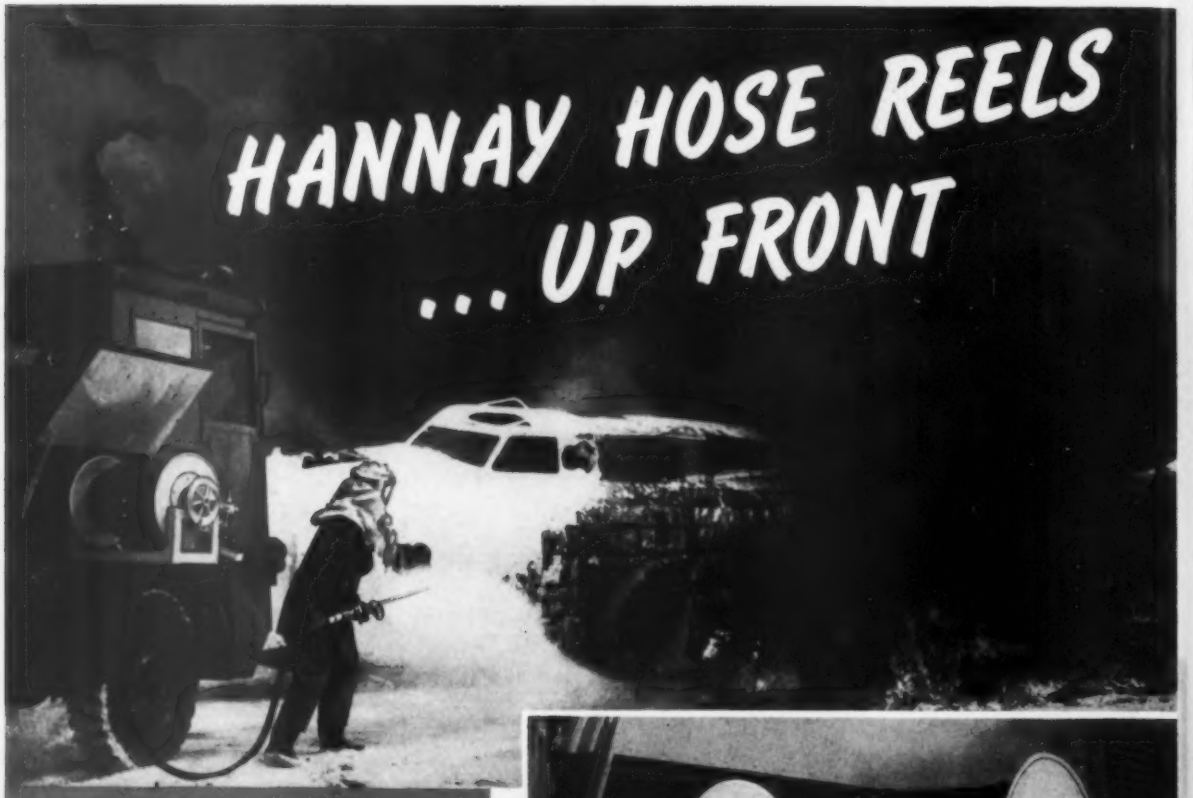
HANNAY HOSE REELS ... UP FRONT



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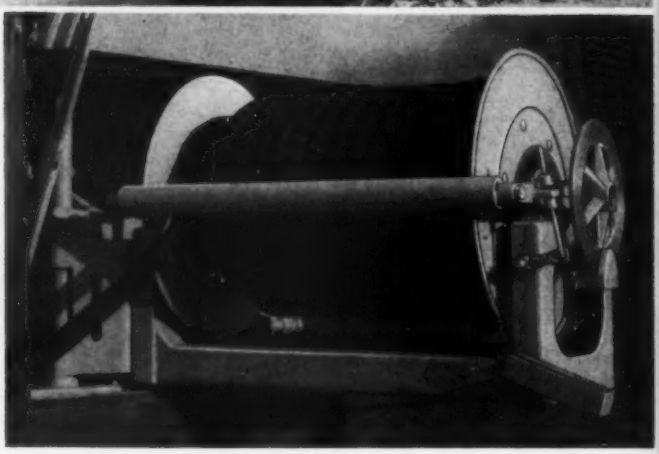

Check the Superior Advantages

HANNAY Electric Drive HOSE REELS

- WATER RESISTANT
- VAPOR RESISTANT
- EXPLOSION - PROOF

★ Extra strong; withstand high pressures

★ Explosion-proof, heavy duty motor, sealed against fog, foam, fumes, water

★ Sealed push button control; no gears to shift; no clutch to engage

★ Safe rewind speed; always under control

...LOOK FOR THIS

Yes . . . in performance and service, Hannay Hose Reels are "up front". The dramatic illustration above shows Air Force Fire Fighters spraying foam from a new American LaFrance crash truck on burning aircraft. And the reel, of course, is a Hannay, specially designed for military service. When YOU need good hose reels, standard or special performance, remember HANNAY. . . . built to do a BETTER job, in fire-fighting, in industry, in national defense.

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REG. U. S. PAT. OFF.
HOSE REELS
CLIFFORD B. HANNAY & SON, Inc.
WESTERLO, NEW YORK

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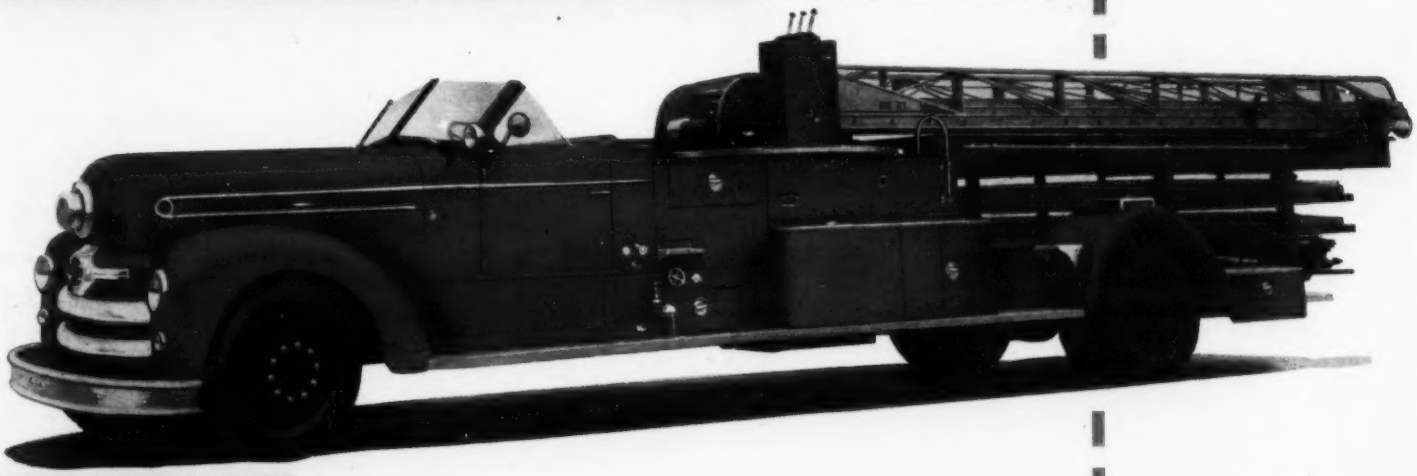
MANUFACTURERS OF MANUAL AND POWER OPERATED HOSE REELS FOR EVERY PURPOSE

IN OKLAHOMA CITY IT'S Seagrave

Agriculture, oil, manufacturing plus fine distribution and transportation facilities have made Oklahoma City one of the great metropolitan and cultural centers of the Southwest. In Oklahoma City, like in so many other great cities throughout America, dependable fire service is a "must" — and naturally that means Seagrave.



THE SEAGRAVE CORPORATION
Columbus, Ohio.

Bickle-Seagrave, Ltd.,
Woodstock, Ont.

Seagrave

THE GREATEST NAME IN FIRE APPARATUS

G-E CIVIL DEFENSE FILM AWARDED FREEDOMS FOUNDATION PUBLIC SERVICE MEDAL

Outstanding public service release currently available for civic and industrial showings

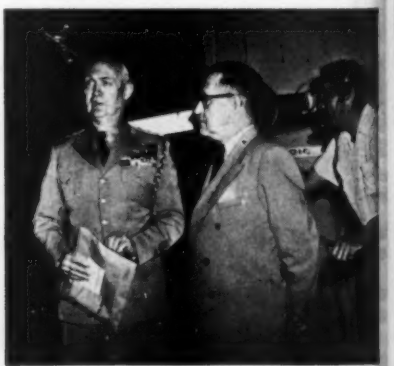
MORE than 10 million people have seen General Electric's civil defense film showing how a city prepares its communications network for vital disaster service. A dramatic documentary, the 22-minute motion picture stresses the role of communications in everyday life, depicts an atomic blast over Syracuse, N. Y. and demonstrates how the existing communication systems of a city and a county can be coordinated in an emergency. The film is a part of the nation-wide Communications Advisory Service, a G-E organization of electronics engineers whose consultation services are available to communities and industries of every size.

One of the most popular films in G-E history, "Voice" is being sponsored by civic and industrial groups across the nation to stimulate public interest in civil defense. If you want it for your community at only nominal cost for mailing, call the CAS* man at the G-E office near you, or write us. *General Electric Company, Section 5992,— Electronics Park, Syracuse, New York.*

**Communications Advisory Service*

Freedoms Foundation president Kenneth D. Wells, presents award scroll to Roy D. Jordan (center), secretary of G.E.'s Electronics Division CD Committee, and Neal F. Harmon, G.E.'s CD Coordinator.

The film shows evacuation of residents from the city by taxicab after the atom "blast" plus many other eye-opening scenes. Will your city be prepared? Be sure to see this timely civil defense film.



Lt. General Willis Crittenberger, commanding First Army, with G.E. Vice-President W. R. G. Baker on nationwide TV showing of film. More than 30 TV stations have screened the picture as a public service.

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FIRE ENGINEERING

SEPTEMBER, 1952 VOL. 105, NO. 9

With the Editor

Serving Two Masters

The fire department is one of the most essential of all municipal services. It deals in the preservation of life and property. There should be no room in it for politics, or pinch-penny parsimoniousness. There should be no compromise with economy when it comes to the fireman's job, and the facilities with which he has to work.

Unfortunately, these simple truths are not accepted by certain civil servants as evidence in the misbegotten efforts to have firemen "double in brass" and perform police as well as fire duty.

Lest we be accused of harping on a wornout subject—of barking up trees so to speak, we would like to take readers back to the *National Firemen's Journal* of November, 1877, telling about an order issued in the Fall of that year by the Fire Commissioners of the City of Cincinnati, which directed that firemen shall be commissioned and sworn in as special policemen, and required to perform such duties as are required of the regular policemen. A provision in the order stipulates that firemen shall not go an "unreasonable distance" from the engine house in the performance of police duty.

This economy measure, as the politicians dubbed it, appeared so attractive to certain of the good officials of the City of Philadelphia that a similar proposition was entertained by that body.

This was 75 years ago, and forthwith the editors of the Journal that was to become FIRE ENGINEERING took up the cudgels against the idea. They've been doing it ever since, whenever, in fact, that this hoary-headed false-economy measure is put forth as the great panacea by some city manager or engineer.

Seventy-five years ago the *National Firemen's Journal* said: "We cannot but regard this policy of assigning to the fireman a double duty, or a divided duty, as impolitic and unwise, and as demoralizing to the force in many ways. That a man cannot serve two masters is a fact that was demonstrated centuries ago; that a man whose time and energies are divided between two interests can do justice to neither is a fact which we all see illustrated daily. No higher duty, or one involving the interests and welfare of the public to a greater extent, can be found than that charged upon the firemen of our . . . cities. To do this duty promptly and efficiently they must be well trained, vigilant and thoroughly disciplined; and constantly on the alert. They can be neither of these if they are required or permitted to pursue other employment." The Cincinnati order recites that in case of an alarm of fire while the members of the company are engaged in police duty, they shall be governed by the particular circumstances, and use proper discretion in giving their services to police or fire duty, as the exigency of the case may seem to require.

"That is to say," went on the Journal, "if one or more firemen are engaged on police duty which they deem important, the whole city may burn down without their being required to do fire duty. If they should happen to be on the track of some criminal, for whose capture a reward is offered, it is easy to see that their use of 'proper discretion' would lie in the direction of self-interest . . . Owing to the absence of one or two members on police duty, an entire company might be crippled at a critical moment, and its costly apparatus rendered useless, while a conflagration is raging.

"The ordinance offered to the Philadelphia Council . . . is even worse than the Cincinnati order. It provides that the Mayor shall add to the police force the number of men now employed as firemen, and shall select from the policemen such persons as he may deem qualified as firemen; and may assign the police either as firemen and policemen, or both; and he shall have the same right of dismissal as he now possesses in relation to the police."

The Editor concluded: "It would be almost impossible to conceive a plan better calculated to demoralize both the police and fire department than this of making the duties of its members interchangeable. Its effect would be to put men into each department having little knowledge of the duties required of them and to substitute a haphazard service for a regular system and a disciplined force in each branch of the service. Because the firemen do not find employment for twenty-four hours a day does not furnish a valid reason for hunting around to find more work for them to do. . . . It is a recognized fact that ten minutes service in the early stages of a fire are worth more than hours of work after the flames have obtained good headway."

There you have it! It would seem after reading of the problems of Philadelphia and Cincinnati in 1877, and comparing them with today's problems of Stamford, Conn., and numerous other cities, towns and villages in this country and the Province of Quebec, where the idea of sharing the job and "doubling in brass" is being practiced and/or advocated, that those charged with administration and operation of our municipal services have a lot yet to learn—75 years' worth of it, in fact!

Fred Shepard

Boston Conference of I.A.F.C. Sets New Records

Exhibit Revenue Tops All Previous Conventions; Active Membership Present Totals 534

A STAFF REPORT

FIRE ENGINEERING is not quite as old as the International Association of Fire Chiefs which celebrated its 79th year with its Convention in Boston, August 25-28 last; nevertheless, for all its three-quarters of a century existence, this Journal has been faithfully recording the International's gatherings, and relating them to the progress made by the nation's fire service.

In introspect, those earlier conferences have been referred to and described with a plentiful sprinkling of laudatory adjectives. Some, in fact, have been "superlative" in all details. All of them mark milestones in the grand and glorious history of the fire service.

The Convention concluded Thursday, August 28th, in Boston, was no exception to the record. It was outstanding in all respects, with an attendance of 1417 registrants (actually the total attendance was near the 1500 mark) of which a goodly percentage were on the distaff side. Exhibits were in number, 58, a record, testifying to the exceptional work of Chief Clyde Canning of Midvale, Utah, and his Exhibit Committee. The program of entertainment and education likewise set new records, credits to the splendid work of the Boston Fire Department, and the Program Committee of the Association.

The Officers and Board of Directors of the Association met on Sunday prior to the opening of the Conference, at the Hotel Statler, with almost a full attendance, only Chief John Alderson of Los Angeles being absent as a result of illness in his family. Much routine and special business was transacted by the Board, including the nomination of an old friend of the Association, Clarence Goldsmith of the National Board of Fire Underwriters, to Honorary Life Membership. Two other outstanding figures, Dr. Harry Archer, Deputy Commissioner, New York Fire Department, and W. Fred Heisler of Oklahoma A & M University also were named Honorary Members.

Photo by Hugh Walker

Newly-elected officers of the I.A.F.C. (Left to right): Ex-Chief Daniel B. Tierney, Secretary-Treasurer; Chief G. R. McAlpine, President; Chief Henry G. Thomas, First Vice-President; Chief C. Grey Burnett, Second Vice-President.

Among other business was the report of Chief Ray Tiller and a committee on a revised accounting practice for the Association; approval of increased space for the headquarter's office; decision to proceed with a text on meeting the hazards imposed by increasing use of LPG and other flammable volatiles; adoption of a recommendation from Norfolk, Va., on establishing "red letter" calendar days on fire prevention; and progress reports by the general manager, and committeemen. The Board voted commendation for the excellent work done by Chief Canning, on exhibits, and to Chief William Fitzgerald of Seattle for his outstanding report on fire department salaries.

The business of the Conference got under way Monday, the 25th, with Chief Rudolph Swanson, president, presiding at the opening session, The invocation was given by Rev. Louis E. Logue, SJ, after which came the posting of the colors, the national anthems of Canada and the United States and the introduction of notables, including Fire Chief John V. Stapleton of Boston, The Hon. Michael T. Kelleher, Fire Commissioner Boston, and the city's Mayor, Hon. John B. Haynes.

Chief George McAlpine, first vice president of the Association responded to the address of welcome by the Mayor. There followed remarks by President Swanson and then the impressive memorial services with invocation by Rev. Russell T. Loesch, Chaplain, Melrose Fire Department; an address by Very Rev. Mons. Henry J. O'Connell, Chaplain, Boston Fire Department and a memorial prayer by Rabbi Samuel I.

Photo by J. Russell Lowell

The delegate to the I. A. F. C. Conference in Boston who traveled the greatest distance was Chief Adolfo Valbuena, of Caracas, Venezuela. Here he is being interviewed. Left to right (seated): The reporter; Mrs. Valbuena; Louis Suarez, interpreter; (standing left to right) Chief John V. Stapleton and Fire Commissioner Michael T. Kelleher of Boston.

HIGH POINTS OF 1952 I. A. F. C. CONFERENCE AT BOSTON

Total Registration: Approximately 1500, of which 534 were Active Members, 368 Associate Members, 368 ladies, and the balance guests.

Exhibits: 58 companies had displays, with revenues totalling over $14,000—a new high for the Association.

New Officers: President, Chief G. R. McAlpine, Oklahoma City, Okla.; First Vice-President, Chief Henry G. Thomas, Hartford, Conn.; Second Vice-President, Chief C. Grey Burnett, Ottawa, Ont.; Secretary-Treasurer, Ex-Chief Daniel B. Tierney, Arlington, Mass.; Executive Secretary, Jay W. Stevens, San Francisco, Calif.

1953 Convention City: Toronto, Ont.

1954 Convention City: Houston, Tex.

Dates for 1953 Convention: September 15, 16, 17 and 18 (Dominion Association meeting, September 14).

Headquarters: Hotel Royal York

Photo by J. Russell Lowell

Floral design in the Public Gardens, Arlington and Beacon Streets, Boston, honoring the I. A. F. C. Chief Stapleton, Boston, is at left.

Korff, Chaplain, Boston Fire Department. Selections by the Ecker Ensemble supplied the appropriate musical background for the services, during which the names of all members who passed on during the last twelve months were called. As each name was read, a floral tribute was added to a central cross on the platform.

The business and technical sessions got under way at 2:00 P.M. in the Grand Ballroom of the Hotel Statler, Chief Swanson presiding. The president read his report detailing the progress of the year and appointed Conference Committee Chairmen: Nominating Committee, Herbert Friede, Washington; Resolutions, Chief Charles Delaney, Lakewood, O., and Courtesies, Chief Wm. Cawker, chairman. Reports were also received at that time and later from Divisional heads; and the general manager, James E. Jagger, and secretary-treasurer, Chief Daniel B. Tierney, Arlington. These disclosed the Association to be ahead in membership, and financially, over the record of the previous year.

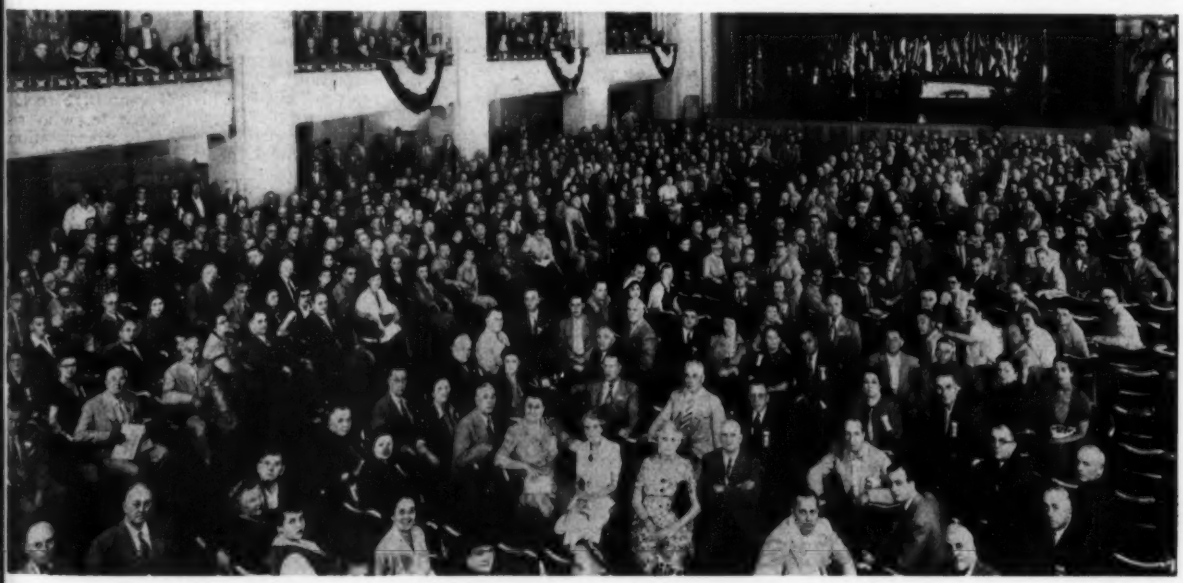
Technical Program

The Technical Program opened on Monday, at 2 P.M., with an address by R. M. L. Russell, Assistant Chief Engineer, Factory Insurance Association, Hartford, Conn., entitled "Fire-Industry and the Fire Service Fight it Out—but Together—and How. "The speaker urged chiefs to make it their first order of business after the conference to consider each industrial plant under their jurisdiction a personal responsibility.

James J. Duggan, Carbide & Carbon Chemical Corp., Charleston, W. Va., no stranger to the Association, gave the large audience much to think about in his technical paper "Fire Extinguishing Mediums—and Their Use." Mr. Duggan summarized the utility of extinguishing mediums as follows: 1) Water, including that to which chemical compounds such as mechanical foam solutions and wetting agents have been added to increase and broaden its fire extinguishing efficiency, is our most universal fire extinguishing medium; 2) Carbon dioxide and dry chemical are most efficient fire extinguishing mediums for use in portable extinguishers and for the protection of special hazards; 3) Foam will retain the position of a primary requirement for large Class B fires, and 4) Any type of medium that is injurious to life should be restricted in use to locations where human contact is not possible.

Edward N. Montgomery, Deputy Chief in Charge, Fire Prevention Division, Boston Fire Department, spoke on "Overall Fire Prevention and Inspection Responsibilities of the Fire Department."

In the afternoon at 4 P.M., the guests saw a stirring exhibition on Boston



Fay Photo Service

I. A. F. C. Conference assembled in Grand Ballroom of Statler Hotel for Memorial Service.

Photo by Hugh Walker

President-elect G. R. McAlpine (left) and Mrs. L. C. Canning, wife of the Chairman of Exhibits hold up a hand-made quilt which is the gift and workmanship of the latter, to retiring President Rudolph H. Swanson.

Commons in which the Members of the Boston Fire Department staged an exhibition drill and a competitive pumping with old hand tub fighting it out with a steamer and a modern automotive pumper. The Boston Fire Department band enlivened the event with musical numbers.

In the evening the ballroom was given over to a "Get Acquainted Party," with music, dancing and refreshments.

Tuesday's Program

Tuesday's sessions included a paper by Kyle Laughlin, Director, Fire Services Division, Federal Civil Defense Administration, titled "The Present Status of the Fire Program in Civil Defense." In this he placed emphasis on the types and kind of fire fighting equipment which the FCDA specifies, and which it is prepared to supply target areas on a cost-matching basis. He reviewed fully the over-all functions of civil defense programs.

The problems of the fire chief in time of flood were interestingly detailed by Chief Waldo Merrill, Council Bluffs, after which Richard C. Steinmetz, Chief Special Agent, Mutual Investigatio Bureau, reported on "What Can B Done About That Suspicious Fire." D Steinmetz related crimes in other class fications to the setting of fires, and s as $25 million the amount of damag annually caused by incendiary or sus picious fires. He also suggested strateg which chiefs may employ in meeting th serious problem.

State Fire Training Program

A highlight of the Conference was th presentation of a Technical Program i the afternoon captioned "Meet the Stat Fire Training Program," which told a length, and dramatically, the remarkable job in statewide training and organiza tion for mutual aid done by the State of New York.

The Program was divided into two sections, the first opened by Fred Shep-

A new kind of signal for the Old North Church of Boston. Photo shows Fire Chief Peter Loftus of New York City inspecting the initial installation of the Edwards Fire Alarm System with Fire Commissioner Fred Madden, of Norwalk, Conn., watching, and Fire Commissioner Michael T. Kelleher, of Boston, testing the new device. The fire alarm system was a gift of the Edwards Company of Norwalk to the City of Boston during the I. A. F. C. Conference in this city.

Photo by Hugh Walker

Old self-propelled steamer which participated in demonstration on Boston Commons at the I.A.F.C. Conference.

perd, Editor, FIRE ENGINEERING, who set the stage by reviewing the historical background of nationwide fire service training and the part played by the Association. He was followed by B. Richter Townsend, Chief, Bureau of Fire Division of Safety of the State, who set forth the principles of the presentation. Then came J. Palmer Harcourt, Deputy Director of the Division who explained the philosophy and organization behind the State's program. President Rudolph Swanson told about the State Fire Advisory Board, of which he is Chairman, after which Roswell Pooler, Safety Field Representative of the Bureau, outlined the details of disaster plans and its relationship to firemanship training.

After a "7th Inning Stretch" the program resumed with a unique panel of a "meet the press" type. This was participated in by Chiefs Roi B. Woolley, Fire ENGINEERING; George McAlpine, Oklahoma City (vice-president); Henry Thomas, Hartford, also a vice-president; Robert Byrus, Director, Fire Service Extension University of Maryland; Charles Burnett of Newark and Warren Y. Kimball, Editor, Fireman. These gentlemen fired questions at Chief Townsend and his chief aide, Dr. L. C. Silvern of the State Bureau. The audience also joined in submitting questions.

Technical sessions of Wednesday

ened with a paper by Arthur L. hornton Chief, Protective Equipment anch, Scientific & Technical Equipent Division, Dept. of Commerce, ashington on "The Present Status of aterials Available for Fire Apparatus d Equipment Manufacturers." He enhtened chiefs on the problems faced apparatus manufacturers in the effort secure material for their products ring defense production. He also subitted figures on the number and kind

Photo by J. Russell Lowell

Three-way pumping contest on Boston Commons, featuring a hand engine (tub), a self-propelled steamer and a modern motor fire engine.

f fire apparatus built during the past ear.

He was followed by an illustrated lecure by J. L. Risinger, Assistant Manger, Claim and Safety Department, Socony-Vacuum Oil Company, Inc., New York on "A New Method of Exinguishing or Controlling Oil Storage Tank Fires." This was the first time fire hiefs had been given the comprehenive story of this newest innovation in ighting bulk oil tank fires. The colored ictures embellished the speaker's descriptive talk, which won hearty applause.

Another old friend of the Association,

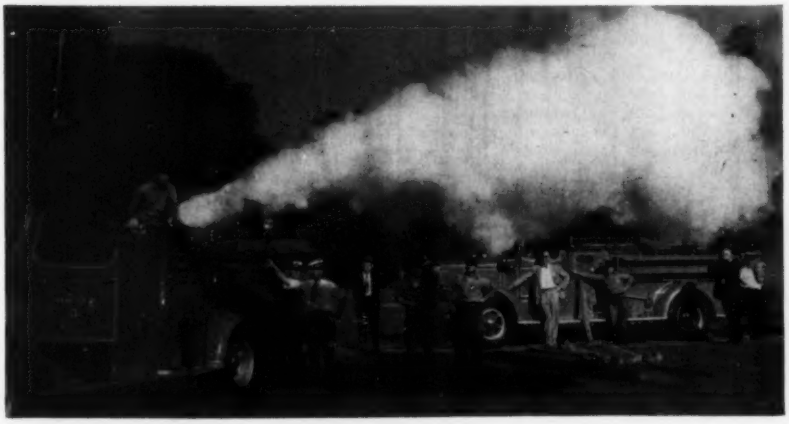


Photo by J. Russell Lowell

Monday afternoon was enlivened by exercises conducted by local fire fighters on Boston Common. Here one of the latest type pumpers demonstrates its low pressure carbon dioxide equipment used to combat Class "B" and "C" fires.

Chief Walter W. Stephen of the Monsanto Chemical Company Fire Department, Anniston, Ala., expounded on the Village Fire Department. Few know the problems of the small volunteer department better than Chief Stephen, and his address was enthusiastically welcomed.

The afternoon session was given over to a Round Table discussion, with Chief Roi B. Woolley of FIRE ENGINEERING serving as moderator.

This was a wide-open "free-for-all" of questions on all phases of fire control and prevention, taken from a "Question Box" and shot at the moderator from the floor. It proved a busy afternoon.

Photo by J. Russell Lowell

Registration moved smoothly and quickly under the guidance of Registration Committee Chairman Koltonski.

Thursday morning, Lorenzo J. Jones, Chief of the Duluth, Minn., Fire Department described what can happen to a municipal fire department during a heavy snow storm. The crisis calls for a practical readjustment of all phases of fire fighting, and facilities to further fast response and attack.

George Richardson, Secretary-Treasurer, International Association of Fire Fighters discussed the important subject "Fire Fighter's Pensions Vs. Social Security," leaving the delegates much to think about. He brought them up-to-date

Photo by J. Russell Lowell

At the opening session of the Boston I.A.F.C. Conference (left to right): Fire Commissioner Michael T. Kelleher, Boston; Mayor John B. Hynes, Boston, and Chief Rudolph H. Swanson, Jamestown, N. Y., President of the I.A.F.C.

on legislation passed, and pending in the nation's capitol.

"What Firemen Should now About Welding Gases and Calcium Carbide" was the title of the topic of a paper prepared by H. F. Reinhard, secretary, International Acetylene Association of New York, and read in his absence by L. G. Matthews of that Association. The paper was highly informative. "Keep water away from calcium carbide" he urged." Where welding gas cylinders are used, remove them before a fire reaches them, if this can be done without detracting from the fire fighting effort. If not removable, cool the cylinders down with water streams."

The morning saw completion of "unfinished business" of the Association, including reports on attendance.

Such business as was not completed by noon Thursday was carried over to a meeting at the plant of the Gamewell Company, Newton Upper Falls, to which the delegates were taken on a most interesting sight-seeing trip.

Busy Chief L. C. Canning, in charge of exhibits staged an innovation in the annals of the Association, when prizes were awarded lucky holders of tickets left at exhibitors' booths. This was a new Conference feature and occasioned much excitement.

Exhibits were held in the First Corps Cadet Armory, diagonally across the street from the Statler. The total number of exhibits was 58 and included nearly every leading manufacturer of fire apparatus and equipment.

The Conference closed with the Annual Banquet, held in the Imperial Ballroom of the Hotel Statler, with about 500 in attendance. The principal speaker was Abram Leon Sachar, president, Brandeis University, Waltham, Mass. The Rev. Edw. B. Broderick, Diocesan Director of Radio and Television, New York City, also addressed the gathering.

As in the past, the new officers were officially installed at the banquet.

Convention Notes

For the third time in a row, Chief L. Clyde Canning, of Midvale, Utah, Chairman of the Exhibit Committee, has set a new record, both for the number of exhibits and the total revenue therefrom. Revenue this year exceeded $14,000 as compared with $12,500 for 1951. The outstanding success of the exhibit feature speaks volumes for the tireless energy of Chairman Canning.

* * *

As usual, the Registration Committee, under the capable guidance of Chief A. H. Koltonski, did a bang-up job in registering members, associates and guests. The long hours spent at the registration desk assured prompt service to arrivals at almost any hour.

* * *

The very fine report on fire department salaries, prepared by Chief William Fitzgerald, of Seattle, Wash., is bearing fruit in a big way. Many fire chiefs have reported raises during the past year due to Chief Fitzgerald's outstanding work.

* * *

Fortunate indeed is the Fire Chief entertaining on I. A. F. C. conference who has the backing of a Fire Commissioner with the enthusiasm and drive of Michael T. Kelleher of Boston. Commissioner Kelleher was on hand at all

The Belfry of the Old North Church, where Paul Revere hung his lanterns. This famous church was visited by many in attendance at I. A. F. C. Boston Conference.

times to make sure that his guests were not neglected. Host Chief John V. Stapleton, too, was ever present to see that things ran smoothly.

* * *

The half-day session, entitled "Meet the State Fire Training Program" staged by "Rick" Townsend and his capable aids, was a masterful presentation. It provided the explanation of why the firemanic training program has proven such an outstanding success.

Motor Fire Apparatus Manufacturers Meet

The Motor Fire Apparatus Manufacturers Association held its annual meeting on Monday, July 14th and Tuesday, July 15th, at the Mark Twain Hotel in Elmira, N. Y.

The meeting was marked by satisfaction with what the Association had accomplished and enthusiasm for advancing the industry through the Association in the year ahead.

Sessions were held on Monday and Tuesday mornings. The afternoons of the two days were occupied by inspection tours of the plants of the American-LaFrance-Foamite Corporation and the Ward LaFrance Truck Corporation. Both companies were generous in their hospitality and the time and effort they devoted to the tours.

The tours were highly interesting and there was no disposition on the part of anyone to make it short or get it over with quickly. Everyone was keenly interested and spent a great deal of time in examining the plants, facilities and equipment under production.

On Monday evening the American-LaFrance-Foamite Corporation and the Ward LaFrance Truck Corporation were hosts to the Association at a cocktail party and dinner at the Mark Twain Hotel. President Maxim acted as toastmaster. In his remarks of appreciation to the hosts, he said that this was the first time in the history of the industry that any company had made such a friendly gesture to the rest of the industry. He said that one of the achievements of the Association during its first year of re-activition was that "it had very definitely raised the standard of thinking in this industry."

The Association presented each host company with a citation "For Distinguished Public Service." The citation stated that the company had received it for having "conducted the members of this Association on a tour of its plant thus permitting competitor companies to inspect its facilities and add to their knowledge of policies and techniques designed to advance the industry's determination to continue to provide America's communities and military installations with the world's most powerful and effective fire fighting equipment."

At the opening session Monday morning, President Maxim reviewed the program of the Association. He emphasized the importance of work done in connection with government controls. He pointed out that the material control problem had been solved and that progress had been made with regard to price control problems.

De-Control of Prices Asked

General discussion was had on price controls. Everyone expressed himself

(*Continued on page 792*)

President Ernest L. Maxim of Motor Fire Apparatus Manufacturers Association (center) presents citation to President George R. Hanks, of American-LaFrance-Foamite Corporation (right), as Joseph G. Grossman (left), of Ward LaFrance Truck Corporation (also recipient of citation), looks on.

Ten Firemen Killed, Many Hurt In Danish Naval Arsenal Blast

First Official Report on Tragedy That Claimed 16 Lives and 30 Injured

A SPECIAL REPORT

Editor's Note: **Characterized as the most tragic incident in the annals of the Copenhagen, Denmark, Fire Brigade for more than 70 years, the fire and resulting explosion in the Holmen Navy Depot (the arsenal of the Navy) which killed 16 men outright and injured 30 others, 21 of them officers and other members of the Brigade, received only scant mention in this nation's press. Owing to security measures, FIRE ENGINEERING's Danish correspondents were unable to release only the most general information about the disaster.**

It remained for President Rudolph Swanson, of the International Association of Fire Chiefs to personally secure the most authentic report of the tragedy released to date from Chief Povl Vinding, head of the Copenhagen Fire Service. This report, which bears the official approval of the Royal Navy, gives a most accurate, detailed account of events leading up to and following the blast which laid low almost the entire initial fire force to respond to the first alarm of fire.

The editors have taken no liberties with the report other than to append one or two observations based upon data secured through other channels, and not covered by the official release.

It is a pleasure to bring to our readers this exclusive feature and at the same time to acknowledge the cooperation of President Swanson and the International Association of Fire Chiefs through whose good offices the report is made available by the courtesy of the Copenhagen Fire Brigade, Chief Vinding.

FRIDAY, the 23rd November, 1951, at 10:39 p.m., the Copenhagen Fire Brigade was summoned to a fire at Holmen (the Arsenal of the Navy). The call was received from alarm-box "Holmen 10" which is situated in the guards-room on the bridge leading across to the entrance of the arsenal. Fire Station H (headquarters) has clocked the alarm at 10:39 p.m.

The telegraph operator at Station C wrote on the Morse: "Station C. Fire. Holmen 10. Arsenal Island, Shipyard bridge." Station H replied: "Understood." Fire engines from Station C were dispatched. They consisted of one ladder truck, one pumper and one fire tender. From Station H, Officer in charge, Mr. Monsted, one tender supplied with oxygen apparatus for each member of the crew, one turn-table ladder, one pumper and one fire tender. Station O dispatched one hose truck.

The Chief Officer in charge, Mr. Lindhard, was summoned immediately after the alarm.

The fire engines from Station C left in the usual order: Ladder truck, pumper and fire tender, going by way of Prinsessegade. At Refshalevej a watchman from Holmen directed the fire engines down this road. At the depot on the left-hand side of Refshalevej, a naval watchman on motorcycle stopped the fire engines, indicating the way through Kongeporten (The King's Gate), and from there on to a depot, which was said to be on fire. Approximately 50 meters from The King's Gate the vehicles were stopped once more by a marine, who jumped on to the ladder truck and acted as guide. Without being asked, he said to Firemaster No. 14, Jensen, "There is nothing to be afraid of; there are no explosives in there." The fire engines were then driven on to the actual site of the fire, and brought to a standstill in the following positions: The pumper close to the canal and to a certain extent shielded by the barrels, which can be seen top right on the bird's-eye view of the site (Fig. 1). The ladder truck in the immediate vicinity of the pumper; and the tender was driven down to the canal, close to the bridge leading across here.

When the fire engines arrived, there was a severe blaze in a right-angle shaped single-storied wooden house, the remains of which can be seen in the center of the aerial view, close to the powder magazine (Fig. 1). At the time it was estimated that 6 or even 7 hose lines were required to extinguish the fire.

The crew of the ladder truck commenced taking down a C-hose reel, but before this had been laid out, they were given orders to remove a truck from the burning house. The crew of the pumper began reeling off hose towards the site of the fire, while the crew of the fire tender immediately started laying out suction hose from the canal, and feed hose from fire tender to pumper. This completed, the driver of the fire tender commenced suction.

From Station H the Officer in charge was the first to leave and he took the same way as the fire engines from Station C, viz: Prinsessegade, Refshalevej to Kongeporten, which was open. A marine was standing at Kongeporten and the driver intended to stop, but was waved onwards by the marine, and eventually saw the rear lights of the fire engines from Station C. At the site of the fire, the driver, fireman Nielsen, saw Mr. Monsted indicate the route of the hose, and he also noticed a non-commissioned naval officer. The driver asked a marine what was burning, and got the reply, that it was the artillery workshops.

After a provisional reconnaissance, Mr. Monsted gave orders to summon another pumper and a fire tender, and the driver went to the officer's car, P. 2,

Fig. 1. Aerial view of the scene of the catastrophe. The arrow indicates the center of the explosion just in front of the powder magazine.

in order to call the vehicles over the wireless. He does not remember whether he actually managed to call, but apparently he did, because at the Headquarter's Control Room the vehicles in question were summoned on the direct "Ambulance Telephone," and the telegraph operator at Station F maintains that he put the alarm through to the station without delay.

It is believed that the pumper and the fire tender left Station F at approximately 10:52 p.m. The time of departure indicated on the Morse, 10:54 p.m., is misleading, as this time was only given upon specific request from the headquarter's control room.

The other vehicles from Station H drove to the site of the fire by the same

Fig. 2. Blazing ruins about 20 meters from the center of the explosion. The burning building is seen on the aerial view to the left of the powder magazine.

route as those previously departed, and in the following order: ladder truck, special tender (oxygen equipment), pumper and fire tender. Immediately after Kongeporten, the ladder truck went left by mistake across the bridge to Nyholm, and the special tender followed. From Nyholm they could see the site of the fire and realized that they had gone the wrong way, and they turned back, driving towards the fire.

Fig. 3. The powder magazine after the explosion.

The crew of the special tender, realizing that every available man was needed, approached the Officer in charge for further orders. The driver, fireman Hallin, came somewhat later than the others, as he had to put on his oxygen mask.

In the meantime, the pumper and the fire tender from Station H had been directed close up to the conflagration.

Mr. Monsted, who at the time was right in front of the wooden house, gave orders to move a truck from the building. Then Mr. Monsted ordered the laying out of suction hose from the canal. The pumper was driven close to the canal in order to do this job. Simultaneously he told the crew of the tender to reel off B and C hose from the pumper. The fire tender had to be moved slightly in order to get down the hose reel, and the crew was further delayed as they had to shift the B-hose reel, the first coupling having jammed, thus forcing them to pull the B hose over the cross-bar of the hose reel. Firemen 1 and 2 from the fire tender advanced towards the fire with the C-hose reel, while Sub-firemaster Caspersen waited with the B-C fork pipe for the B-hose reel to be made ready for action.

At 10:53 p.m., 8 mines exploded inside the burning building. The exact time can be stated, for the reason that the automatic clocking system at the headquarter's control room registered a disconnection with the Holmen alarm box at 10:52 p.m. This was also noticed by the telegraph operator at Station C. He had just gone to the Morse in order to connect the circuit to earth, when the wave of the explosion hit the Station.

At the time, the situation at the site of the fire can be lined out as follows:

The Officer in charge and his orderly were reconnoitering the site, together with lieutenant Prior from the Arsenal. The crew of the ladder truck from Station C had just finished dragging the truck out of the burning building. The crew of the pumper from Station C were laying out hose in the direction of the fire. The tender from Station C had just completed the job with the suction hose. The pumper from Station H, which was standing close to the canal next to the fire tender from Station C, was engaged in reeling off suction hose. The fire tender from Station H had commenced laying down B and C hose. The ladder truck from Station H had just arrived, and the driver and one man were approaching the Officer in charge for further orders. The crew of the special tender were likewise somewhat delayed in getting to the site to get their particular orders from the Officer in charge. The special hose truck had not reached the scene of disaster as yet. Further, three men from "Falck," a privately owned salvage and ambulance Corps, were standing not far from the Officer in charge. A platoon of Marines were on their way across the bridge of the canal, in order to be of assistance.

At the explosion, the following were instantly killed: Fire Officer K. A. Monsted; Fire Master H. V. Hansen; Firemen J. K. Kristensen, H. E. Kristensen, T. Jensen, P. H. J. Nielsen, W. G. Nielsen, B. Hansen Urban, P. S. Marcussen, C. H. Johansen, K. Nielsen;

Fig. 4. The wrecked pumper from Station C after the explosion.

Lifesavers J. Juul, W. C. Jeppson, P. Ankerkilde; Lieutenant E. F. Prior, and Petty Officer S. E. W. Petersen.

The following were seriously wounded: Fire Master A. E. Talbo; Fire Master H. F. K. Theil; Sub-Firemaster J. T. Brask; Sub-Firemaster H. C. Sorensen; Sub-Firemaster H. H. Petersen; Sub-Firemaster K. A. Larsen; and Sub-Firemaster J. C. Caspersen; Fireman A. H. Schmidt; Fireman H. P. Petersen; Fireman K. R. C. Jonsson; Fireman Aa. V. Nielsen; Fireman S. F. Loberg; Fireman E. Hansen; Fireman O. A. L. Christensen; Fireman N. C. Petersen; Fireman E. H. Andersen; Fireman N. B. Sorensen; Fireman S. Aa. R. Pedersen; and Fireman A. T. Blandow; Midshipman P. Broberg; Midshipman Sv. Aa. Andreasen; Private O. A. Jensen; Private V. Mortensen, Private V. Andersen; Private F. Olsen; Private S. Jensen; Private F. Rasmussen; Private E. Leth; Private M. T. Nielsen; and Private H. Ebbesen.

The injuries comprised: Concussion with fracture of the skull; open, and ordinary, fractures of ribs and limbs; cuts of various degrees, and membrane injuries.

Immediately following the explosion, ambulances were summoned over the wireless of the car belonging to the Officer in charge. Even though the car was badly damaged, the wireless was in working order, probably because it was situated in a rather low position which offers shelter. The two switches slightly above the bottom of the window frame had both been broken, however. Later, when the battery of the wireless was almost discharged, it was discovered that the engine of the car was undamaged, so that it was possible to keep up an important contact between the scene of disaster and the control room.

To start with, 4 ambulances were dispatched from Stations C and H, and gradually, as the extent of the disaster became known, all available ambulances were sent off from the Fire Brigade and from the Falck Salvage and Ambulance Corps. The wounded and dead were carried away by the surviving firemen with firemaster Andersen in charge, and as quickly as possible taken to the hospitals. The Italian ladders were used as emergency stretchers for transportation of the badly wounded to the ambulances.

At the time when extra fire engines were ordered to the scene of the catastrophe, which was almost simultaneous with the explosion, Fire Officer Manicus-Hansen, who was on reserve duty, arrived at approximately 11:15 p.m. Also at this time, nearly all the wounded and killed, who were not buried beneath debris, had been taken away by Ambulance.

Immediately after the explosion, Chief Officer of the Fire Brigade, Dr. Povl Vinding, was summoned, and at once drove to the scene of disaster, where he took charge and directed the further necessary operations in respect of fighting down the fire, at the same time taking control of the salvage work.

The endeavours to put out the blaze were continued after the explosion by part of team 64, assisted by approximately 20-30 marines, who, when the explosion occurred, were on their way to the site, running across a narrow bridge from Nyholm. A total of 5 C hoses were employed to limit the fire in the ruins, as it was yet unknown whether any wounded were in the burning ruins.

Shortly afterwards the pumper and fire tender arrived from Station F, and they were given orders to lay out hose to the wooden house which was under erection, and to which the fire was about to spread. At 11:10 p.m., Station D had been given instructions to dispatch its ladder truck, pumper and fire tender. They went down Refshalevej east of the site of the explosion, and from here layed out hose towards the burning ruins.

Some time later, Fire Officers Stangerup and Rasmussen arrived. Further, the special Fire Combat vessel from the Port of Copenhagen Authority arrived.

A total number of 6 B hoses and 17 C hoses were employed.

The rescue work for the missing fire personnel was primarily carried out by the Pioneer team of the Fire Brigade, which had been given the alarm at Station H at 11:10 p.m. The 7 pioneers were assisted by Marines, in such a way that each pioneer took charge of 4-6 Marines. The first clearing up was made along the powder magazine, where the helmets of the missing Fire Officer Mr. Monsted and that of one of the men from "Falck" had been found.

As the first clearing up along the powder magazine proved void of results, the search was continued in the wood-construction house situated opposite. This building had by now partly collapsed. Here Fire Officer Monsted, his orderly Jensen, two Marines, and the 3 men from "Falck" were found, almost in the same place.

After the fire in the ruins had been somewhat subdued, and it was possible to judge the size of the rescue and salvage tasks, it was decided to call for assistance from the Civil Defence Corps, as the activities of organized salvage teams were considered appropriate.

The Civil Defence School was given the alarm at 00:40 a.m. and arrived at the scene at 01:45 a.m. with 2 pumpers, 1 fire tender, 2 recovery vehicles and 1 truck for the crew, which consisted of 3 officers, 1 senior and 39 hands. Later the Civil Defence Section of Naestved turned up with pumper, 2 fire tenders, 1 rescue truck, 1 ordinary truck and 1 ambulance, and the crew numbered 1 officer, 5 seniors and 46 hands.

The Civil Defence Corps took over the search and the salvage work and later on they also carried out substantial propping.

The Pioneers of the Fire Brigade, thus relieved, were now able to make an efficient system of lighting of the site.

During the continued salvage work, the two last missing firemen, Kristensen and Nielsen, were found.

The special Fire Guard was on duty until 25th of November at 11:25 a.m.

Editorial Conclusions

Although the foregoing official report gives few details of the building in which the fire and explosion occurred, or of its contents, additional facts which have come through other channels, indicate that 8 or 10 large mines were located in the one-floor wooden building awaiting periodic overhaul.

Evidence indicates that the presence of these mines had not been reported to the Fire Brigade, which was further misinformed by the advice from marine guards to go ahead, there were no explosives involved, as the foregoing report relates.

What caused the initial fire has not been determined, but authorities were reported discounting the possibility of sabotage. Nevertheless, an official investigation was immediately undertaken by the Navy in the effort to determine the cause and fix the blame, if any, for the initial fire, and why explosives were stored contrary to local safety regulations.

Although the Navy report enumerates eight mines as having exploded, another authority states that the number was ten and that the explosion was felt as far away as Malmo, Sweden, 20 miles distant.

The blast destroyed three major fire appliances as well as the building in which the mines were stored, and severely damaged several important workshops, as is clearly indicated by the accompanying illustrations.

Inspector Kai Monsted, the leading fire officer killed, was a lieutenant in the Army Pioneer Service when he successfully tried for engineer (construction) examinations in 1936. He entered the fire service in Copenhagen the following

(*Continued on page* 791)

Fig. 5. The mine crater.

Fire Service Ladders and Their Use—Part XXVIII

Pompier or Scaling Ladders

By ROI B. WOOLLEY

Editor's Note: This, the concluding Chapter of the series on fire service ladders which was begun in the May, 1950, issue of FIRE ENGINEERING, discusses pompier, or scaling, ladders.

The history of this ladder is an interesting one and readers are referred to Part II in the June, 1950, number of this journal, for that background.

In concluding this treatise, the author again pays grateful acknowledgement to the Committee on Firemen's Training, Fire Department Instructor's Conference, Richard E. Vernor, Chairman, for permission to use photographs of scaling ladder evolutions taken by Mr. Rothery of the District of Columbia Fire Department. The evolutions pictured herein, which are performed by the District of Columbia Fire Department, may vary in some details from scaling ladder evolutions as taught in various other municipal fire training schools. Where there is a noticeable difference, the author has endeavored to explain it.

Most of the data for this installment, however, is taken from the "Fire Chief's Handbook," by Fred Shepperd. This was the first authorative treatise on scaling ladder evolutions to be published in this country and, in the 20 years and ten editions of its existence, no one has ever seriously challenged the evolutions described and pictured in that textbook. It is safe to say that the vast majority of municipal fire departments of this, and many European countries, have adopted and followed the scaling ladder practices described in the Handbook.

As has been told previously, the pompier, or scaling ladder as firemen of this country prefer to call it, has had a long and interesting history in the nation's fire service.

Unquestionably its use and application are debated more by members of the fire service today than those of any other type of ladder. Its opponents claim that it is going out of the picture because it is so seldom needed, and seldom used; because it can be a dangerous tool in the hands of the inexperienced and untrained as well as the physically unfit fireman; because it is difficult to train with it where drill towers or like facilities are not avaiable, and because most rescues can be effected by other fire department ladders.

On the other hand, its adherents emphasize the fact that it is the only ladder that permits reaching floors and roofs beyond the reach of the longest fire department ladders or where, for any reason, ground or aerial ladders cannot be effectively employed. They admit that it takes skill to use a scaling ladder, but they maintain that it is one of the best instruments for working out probationery firemen, helping them to gain confidence in climbing and operating at heights, and in teaching firemanship. They point to its adaptability for rescue work of many kinds, and the fact that it can be carried easily and well on fire apparatus of almost every description. And they emphasize the fact that, like some other fire department facilities such as the sub-cellar pipe, or certain distributors, when they are needed they are badly needed. They can and do cite chapter and verse of incidents, to make their point.

MANY fire chiefs distinguish between the use of the scaling ladder for drill purposes, and in fire fighting and rescue operations. Likewise, there are numerous fire officers, particularly in the medium and smaller communities, who look favorably upon this ladder, but do not include it as regular equipment in their departments.

Some twenty years ago, the editors of FIRE ENGINEERING first queried a representative cross section of fire chiefs on this matter. Chiefs were asked, first, if they considered pompier ladder drills and pompier ladder work really worth while in the then modern first department. Next, if they ever used pompier ladders in fire fighting and life-saving operations; and finally, had they knowledge of lives ever being saved by use of such ladders?

A large majority of respondents answered the questions in the affirmative. Of the majority however, although most of them had used the ladder in fire fighting operations, only a few reported having made actual rescues. Nearly all respondents who replied in the affirmative used the ladder for training and drilling purposes.

A surprisingly large number of replies from smaller places said that, although the department carried no such ladders, the respondents were in favor of them and many indicated it was merely a matter of time before they would have them.

A few replies indicated a misconception of the purposes and uses of this ladder on the part of respondents. One of the most common beliefs was that if a department had other ladders, especially aerial types, the scaling ladder was unnecessary. The reverse viewpoint was stated by a chief in these words: "No matter how long our longest ladder, there will always be buildings in our city which cannot be successfully laddered because of height or other conditions. Here is where the scaling ladder is useful. In the hands of trained men it extends the reach of our longest ladder. Furthermore, it can be used in places, such as alleys and confined spaces, where other regulation ladders cannot be employed."

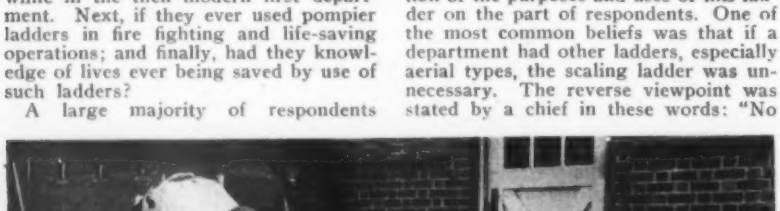


Fig. #1

Later studies indicate the almost universal use of scaling ladders for training rookies and probationary firemen. However, there is some evidence to suggest that this sort of training is not maintained generally in some departments, and that there is a tendency in company drills, where practiced at the department training grounds, to omit scaling ladder operations, at least in those companies whose crews include men considerably physically unfit for such work. For the most part, however, the scaling ladder continues to be standard equipment on modern ladder trucks, pumpers and many rescue units.

No Marked Changes in Ladders

No radical changes have been made in the fire department scaling ladder since it was introduced into this country by Christian Hoell, interestingly enough just 75 years ago, the year in which this publication was launched as the National Fireman's Journal. There have been some efforts to refine the ladder, make it stronger, lighter and easier to climb, but thus far the metal has not been intro-

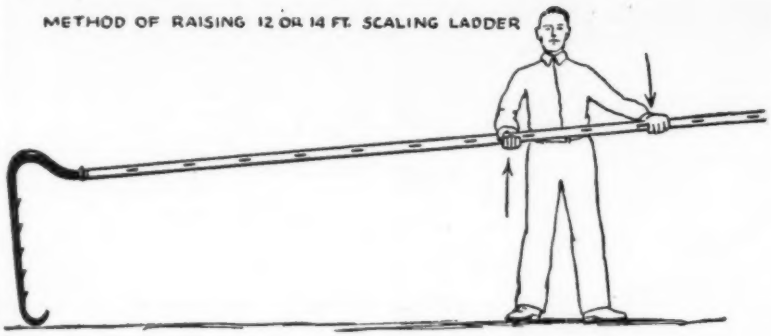


Fig. 1a

duced. In 1931, a Philadelphia concern produced a steel scaling ladder for which certain advantages were claimed, but this never was extensively used.

A word about the modern scaling ladder itself may not be amiss at this point. but before attempting to describe design and construction, it might be well to include a glossary of this ladder's parts. These are:

BEAM OR SPAR: The main structural member of the ladder, similar to the beam of a ground or extension ladder, which carries most of the load.

BRACES: Metal reinforcing strips usually located under the rungs.

GOOSENECK: The curved part of the metal hook at the climbing or hook end of the spar.

HOOK: The steel member which hooks over the window sill or cornice or other object to support the ladder.

RUNGS, ROUNDS OR GRIPS: The cross members, at right angles to the beam, used in climbing the ladder.

SHOES, SADDLES OR BUMPERS: Metal devices (usually two) which hold the ladder out from the wall, when hooked, sufficiently to permit the climber to grasp the beam when climbing, and to afford better foothold.

STRAPS: In the wood reinforced ladder, the metal band which is usually a continuation of the metal hook. This strap usually extends the full length of the ladder's beam and is securely fastened to the beam itself.

Description

The scaling ladders in most general use are 12 feet long. They also come in the 18 foot length ladders. The ladder is made of second growth hickory, having an approximate thickness of 2½ by ½-inch at the butt, and 2½ by ½-inch at the top. The rungs or rounds usually measure fourteen inches in length and are mortised through the ladder. The hooked section measures 30 to 36 inches in length (from neck to point) which width allows the scaler to cover the widest sills, and permits hooking to an average cornice. The under-side is serrated, having a sharp saw tooth edge. The hook is either a part of the steel strip, before-mentioned, which runs the length of the beam, or is rivited to the ladder, with two close-fitting collars driven down on top of the ladder. To these collars are welded two steel straps, one coming down from eight inches on the outside of the ladder, or beam; the other, down in the inside, turning up at the butt on the outside about eight inches.

There are two shoes, otherwise called saddles or bumpers, on the inside of the ladder, one usually at the second round and the other near the foot. In most ladders, steel rivets are driven through the steel straps, the beam of the ladder and the rungs to provide extra strength.

The well-built scaling ladder, before going into service is tested to sustain 600 to 700 pounds weight. The average weight of these ladders is about 40 pounds. Maintenance is not much of a problem, but periodically the ladder should be removed from the apparatus, all metal parts inspected for rust and the wood spar checked for dry rot, splinters or any other imperfections. It is most important to inspect the rungs or cross-members, and their metal reinforcing, particularly at the point where the reinforcing metal strips are fastened to spar and rungs. No particular procedure has been devised for testing such ladders but some departments have made each rung carry a suspended weight of 300 to 350 pounds on each side of the spar when "hooked in."

Scaling Ladder Belt and Hook

A scaling ladder belt is always worn in connection with scaling ladder work. The modern belt is made of webbed duck about 5 inches in width, leather, reinforced heavily where the belt hook is fastened to the belt. Snap-hooks are usually of forged steel, about 9 inches overall, fastened to a 3-inch continuous rung to which the belt is fixed. Some belts are fitted with a cover sheath and pockets for small hatchet or axe, spanner or other tools.

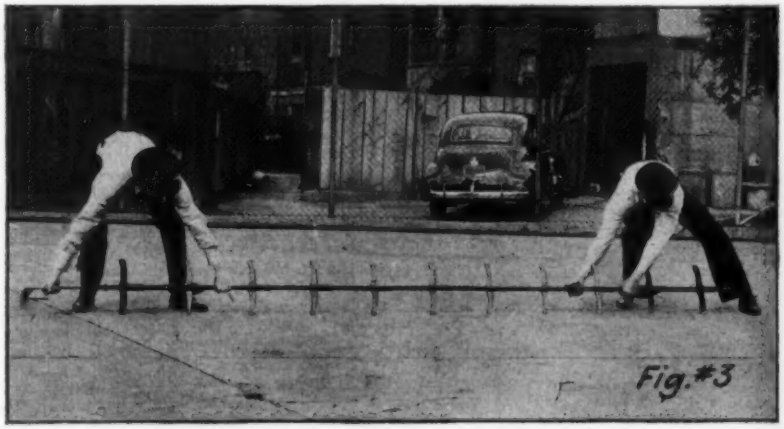
When building up a chain of ladders, or swinging from window to window, the hook on the belt should be in the center of the body. It should also be so centered when a man is sliding a rope. In this position the snap of the hook should face the left side.

When standing on sills or straddling windows, the hook should be placed on the left side, over the hip. When securing himself to the ladder, the hook on the life-belt of the wearer is always handled with the right hand; the other hand holds onto the ladder.

Raising the Scaling Ladder

The first operation in the use of a scaling ladder, after the ladder has been removed and taken to the point of climbing, is to line it up with the building. (Fig. 1) For a one-man raise, some instructors prefer to butt the spar or beam of the ladder against a building. Others prefer to raise the smaller ladders (12 or 14 feet) as shown in the diagram Fig. 1a.

Where ladder is butted against wall or curb or other object the ladder is placed on its side and, the man picks it up as shown in Fig. 1. As he steps under it, the hook drops to the rear as shown in Fig. 2. Note: the ladder should be grasped above the top rung with one hand at the gooseneck, and below the second step with the other. In raising the ladder, the hands are kept on the spar or beam.



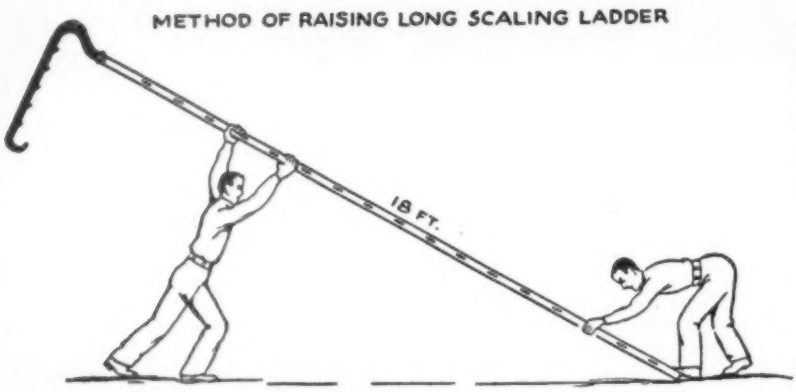


Fig. 3a

The two man raise, advisable with the larger, longer ladders, is performed as shown in Fig. 3, 3a and 4. In making this raise, the butt man is usually somewhat nearer the building on which the ladders is to be used than is shown in the figures. This prevents having to carry the ladder upright which, due to its unwieldiness even more than its weight, is not as simple a matter as it would seem.

Fig. 3 shows about the position of the two men, the man at the butt having his left foot behind the butt of the ladder and his two hands on the beam, holding the butt firmly on the ground, while the second man raises or lowers the ladder by the beam. In this raise the hook is always pointing to the ground.

It will be noted there is a slight difference in the position of the butt man shown in Fig. 3 and 3a and the butt man in Fig. 4. In Fig. 3a, he swings around as the ladder is raised, to brace the spar with his whole foot, whereas in the other raise, Fig. 4, the butt man braces the spar against his instep. In this position he lifts with more of a twisting motion than when he operates as shown in Fig. 3a, which is generally preferred.

In performing the one-man raise, as shown in Fig 1a, the man grasps the spar or beam of the ladder with the left hand just above the third rung, palm downward. He lifts the butt up above the waist, then reaches back with the right hand, four feet from the left, and grasps the spar, the palm and fingers of the right hand pointing up from the ground. The ladder is turned so the hook rests on the ground (Fig. 1a). The operator then raises the ladder and rests it on its butt by pulling up with the left hand and pushing down with the right.

Climbing, Securing, Standing

When climbing, scaling ladders should always be grasped by the beam, spar or pole. The hold should be firm, fingers spanning the beam of the ladder, thumb spanning the fingers. The rungs of these ladders are to be used only for the feet. One method of climbing is shown in Fig. 5. Other departments prefer to have the upper handhold one rung higher, with the man looking upward.

When securing, or hooking on to the ladders, the hook of the life-belt must be hooked on the beam of the ladder above the rung opposite the belt, or when the climber is at the top of the ladder, into the gooseneck as shown in Fig. 6.

It should be noted that in hooking-in and standing on ladders, the ball of the foot must be against the well of the building, the legs stiff, the body rigid in the belt. After hooking-in, the arms should be held straight down at the side of the body, or folded as shown in Fig. 7.

When securing or hooking into the gooseneck of the ladder, the left hand grasps the gooseneck, taking a firm hold, while the right hand takes hold of the hook and snaps it onto the gooseneck Fig. 6.

In hooking a ladder into a window, the question is often raised, should the hook be set in the middle of the sill, or to one side? The answer to this depends upon the kind of climb being made, whether one man or two (as in swinging from window to window) and whether one ladder or more are used, as in building a chain. Generally, the hook should be located at the most favorable position to best enable the climber to enter and leave windows and to operate his ladder in extending his climb.

The single man and ladder evolution continues after the man has the ladder securely fastened into the second story window. He then climbs to the topmost rung as previously described, and as shown in Fig. 5. Arriving at the window he grasps the hook of the ladder with his left hand, and gooseneck with the right hand, reaching a kneeling position on the window sill. He then steps in on the right foot and over the sill as shown in Fig. 7a, if he does not intend to proceed higher. If he is to continue his climb, he straddles the sill, facing the hook. He then grasps the hook firmly, lifts it free of the sill, tilts the ladder out as he lifts, swinging the hook a quarter-turn outward.

Some instructors require that the hook be turned completely away from the building, or at right angle to it. Others prefer to have the hook parallel to the building as it will be if one-quarter turn is made, and the hook held in this position when the ladder is raised to the window above (Fig. 7b). In either case, the raising of the ladder by the man straddling the sill calls for firm grip, good balance of the hook. Once the hook is about 18 inches above the next window, hooked end of the ladder is swung to the left (or right depending whether the man is left-handed or not) and then swung into the window, where the hook is firmly set, as shown in Fig. 8. Note some instructors prefer to have the man's hands further apart than is shown in this illustration.

The procedure is repeated until the desired point is reached. When swinging out on a ladder from any floor, climber should take a sitting position on the window sill, the feet hanging down the inside, then pull the feet up in a cramped position and pivot out on the seat to the right until the feet are outside the window. He then takes hold of the hook with the left hand and the gooseneck with the right hand, turns over on his stomach, with legs hanging down so that the feet will catch the rung of the ladder.

Swinging from Window to Window Using Two Scaling Ladders

It may happen for one reason or another, that the path of climb of a

scaling ladderman may be interrupted and he be forced to detour to another bay of windows. This can be done, using the scaling ladder, by swinging from one window to another on the adjoining bay.

The operation can be performed by one or two men, using one or two ladders. We shall describe the one-man two-ladder evolution first.

Two ladders of the same length are hung in, for example, the center of three windows. Assuming there are three windows to a floor, the right hand ladder should be placed 8 inches from the upright of the window frame (Fig. 10a).

When shifting over to the window on the right, the man swinging over climbs half-way on the right hand ladder and secures himself with his hook on the belt to the beam of the ladder above the rung opposite the belt. The left hand ladder is swung over to the window to the right, by lifting the ladder up two feet above the window sill, then bringing the hook to the right hand sufficiently to give it room to swing out. The hook is then swung to the left until it points towards the right hand window; the ladder is then dropped down to the right and the hook swung into the window and placed in the left hand corner. This operation is outlined in Fig. 10b.

Fig. #6

When the hook is in the window, the butt of the ladder is swung over the back of the man on the other ladder Fig. 10c. The right foot is lifted off the rung, allowing the butt to be placed and held behind the left and in front of the right foot by placing the right foot on the same rung it was taken off from. This sounds somewhat complicated, but it is made more understandable by referring to Fig. 10d.

When swinging over to the window, the climber should take hold of the ladder between the two feet with the right hand and swing it clear of the

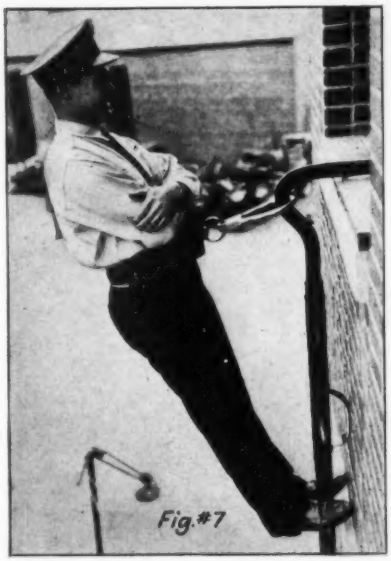


Fig. #7

right foot, then reach out as far as possible with the right arm, looking down to see if the butt is clear of obstructions, then step over with the right foot, then the left hand and left foot; swing over, leaving the left hand ladder behind. When returning to the window, he should climb down half way on the ladder, reach out with the left hand and take hold of the ladder to the left, bringing the butt of the ladder over to the right. Then step over with the left foot, then the right, and swing over to the left, bringing the right ladder with him. The right hand ladder is held between the two feet as before, while the climber secures himself with the hook on his belt to the spar of the ladder. The ladder is then lifted clear of the right foot and swung over the back. The hook is then lifted clear of the hook points over the left hand window, and the hook then swung into the window overhead and placed on the window sill, 8 inches from the left-hand corner.

Transferring from one line of windows to another on the same floor can also be accomplished by the climber lowering the ladder from the window shown in Fig. 10a, to the floor below, and then transferring by "swinging over," pendulum style, as described in the following. This has been termed climbing **en eschelon**, and puts a man one floor above, and one bay to the right, or left of his position.

In this operation the ladder is passed up to the climber (or he may have advanced it himself) and it is placed over the window sill with the hook about 6 inches from the right hand corner (if transfer is to be made to the right). The climber straddles sill, as previously described, then lifts the ladder out and raises it to the story above, as described in the procedure for straddling sills, except that he does not place the hook of the ladder over the sill of the window one story above; instead, he raises the hook about 18 inches above the sill, then with the right hand down near the bottom and with the left hand well upon the ladder, he allows the top of the ladder to drop toward the window on the right row above, giving the ladder a quarter turn to the left and placing the hook over the sill, about 12 inches from the left-hand corner. He pulls the butt of the ladder in against the building, holding the ladder with the right hand, then places his right foot on the bottom rung (right hand or further side of the beam), then reaches up and grasps the spar with both hands, lifts the left leg over the sill and swings pendulum-like over to the window, placing his left foot on the bottom rung (left side of the spar) as he swings.

The climber then ascends to the top of the ladder, straddles onto the sill, as before described.

Another method of transferring from one bay of windows to another is shown in Figs. 9 and 10. This operation consists of standing on sills, and can be performed with one or two ladders.

Fig. 9 shows the climber standing on the sill of the window one floor below and to left of the bay to which he desires to transfer. The left foot is forward on the sill, the knee braced against wall or window frame. Actually, for

METHOD OF ENTERING WINDOW FROM SCALING LADDER

Fig. 7a

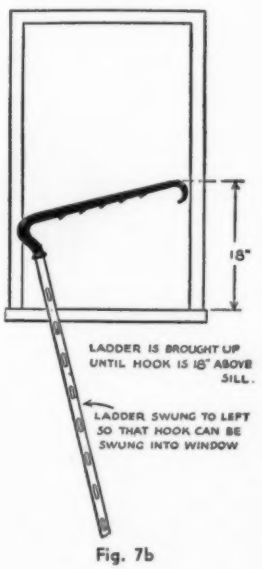


Fig. 7b

safety's sake, this operation should be done with a supporting man holding the man on the sill by his belt hook, or from a sitting position (straddling sill) previously described. The climber may be caught off balance as he attempts to swing the hook into the window above as he is shown attempting to do in Fig. 9. The hook is carried parallel to the building, in this manouvre, until opposite the window and above the sill, at which time it is turned in and lowered onto the sill. In actual fire operation it may be necessary to break a pane of glass and possibly a window frame with the hook of the ladder before setting in the hook; the climber may have a difficult time of it if in standing position as compared with working from the sill-straddling position.

Fig. 10 shows the climber about to let go and swing free on the ladder, which it will be noted, has been hooked in about one foot from the near-edge of the window frame. In this position the right hand firmly grasps the beam, while the left hand holds to the window frame. Before the left hand is released, the ladder is swung over as far as possible, to reduce the arc of swing. One difficulty in this operation may be projecting window ledges which might catch on the climber's foot during the swing. The climber should attempt to gauge this or other obstacles.

Fig. #8

Two-Man Raise Evolution

The two-man operation, using two ladders, is faster and safer than the one-man effort. In this, a ladder is placed in the second floor window, as previously described, except that it is hooked in at the right hand corner. The first man up the ladder slides in over the sill on the floor as illustrated in Fig. 11, while the second starts up. The first climber makes ready to take hold of his partner's belt-hook with both hands as soon as he shows at the window (Fig. 12).

Completing his climb, the second man places himself in a standing position on the window sill with his left hip outside the window frame or wall of the building, left foot close to the window frame, right foot advanced 12 inches from the left foot, if possible, body erect and leaning slightly backward to the left. The man on the inside holds his partner, standing on the sill, tight against the wall or frame with his two hands firmly grasping the belt-hook, which must not be altered regardless of what happens to the ladder (this operation is shown in reverse in Fig. 13).

Fig. #9

When raising the ladder to the floor above, the man on the window sill stoops down and takes hold of the ladder with his right hand, lifts up and turns the hook out to the right until the hook is in the opposite direction from which it was taken. The ladder is then brought up hand-over-hand until the hook is 18 inches above the sill of the window overhead, when the hook is swung or brought over to the left to give the hook room for the swing into the window, and over the window sill. The ladder hook is located in the corner about 6 inches from the window frame.

When scaling ladders are raised or lowered from window to window, the eyes should be constantly on the ladder hook to aid in balancing the ladder. When taking a ladder out of a window, in general practice, the hook of the ladder is brought over to the left corner, then raised up about 18 inches above the sill and swung out to the right until the hook is in the opposite direction from which it was taken. The ladder is then lowered hand-over-hand until the hook reaches the hand, whereupon the hook is then swung in the window, to the left.

When placing the hook on the sill, the man standing kneels down on his left knee and places the hook in the right hand corner, stepping out the same time onto the topmost rung of the ladder with his right foot. The man on the inside pivots out on the ladder as before mentioned. The position of the climbers is changed at each floor, that is, the second man up the ladder stands on the sill and handles the ladder.

Fig. 13 shows the procedure followed by some municipal departments, which varies slightly from that just described.

An even more satisfactory method, in the opinion of some authorities, is pictured in Fig. 14, in which one man straddles sill, as in the one man raise, while his partner holds him fast from inside, by means of his belt hook.

Building a Chain

The procedures for building a chain of scaling ladders varies with different municipal departments. To the author's knowledge, this evolution has always been limited to the drill tower and training ground and has never been practiced in actual life saving at a fire. The method pictured, as practiced by the District of Columbia Fire Department, may be found to differ in some minor details from the method outlined in the following, which has been the practice in the New York and other city fire departments for many years.

In starting the chain climb, six ladders of the same length are laid out on the ground, assuming the building is six stories and each story is of the same height. Ladders should be laid out in numerical order if they are marked. If the first story is higher than the other ones, one longer ladder has to be used.

Men building the chain must always secure themselves by means of their ladder-belts to the gooseneck of the ladder, that is, if the ladders are of the same length. If one ladder is longer than the others to be used, the second man in the chain must hook on, or secure himself half-way on the ladder. On the next ladder up, the second man secures himself half-way on that ladder and the third man takes the second man's place on the long ladder. After that the remainder of the men in the chain take the places on the ladders of the preceding man. The leading man building the chain must always hook on in the gooseneck.

Fig. #10

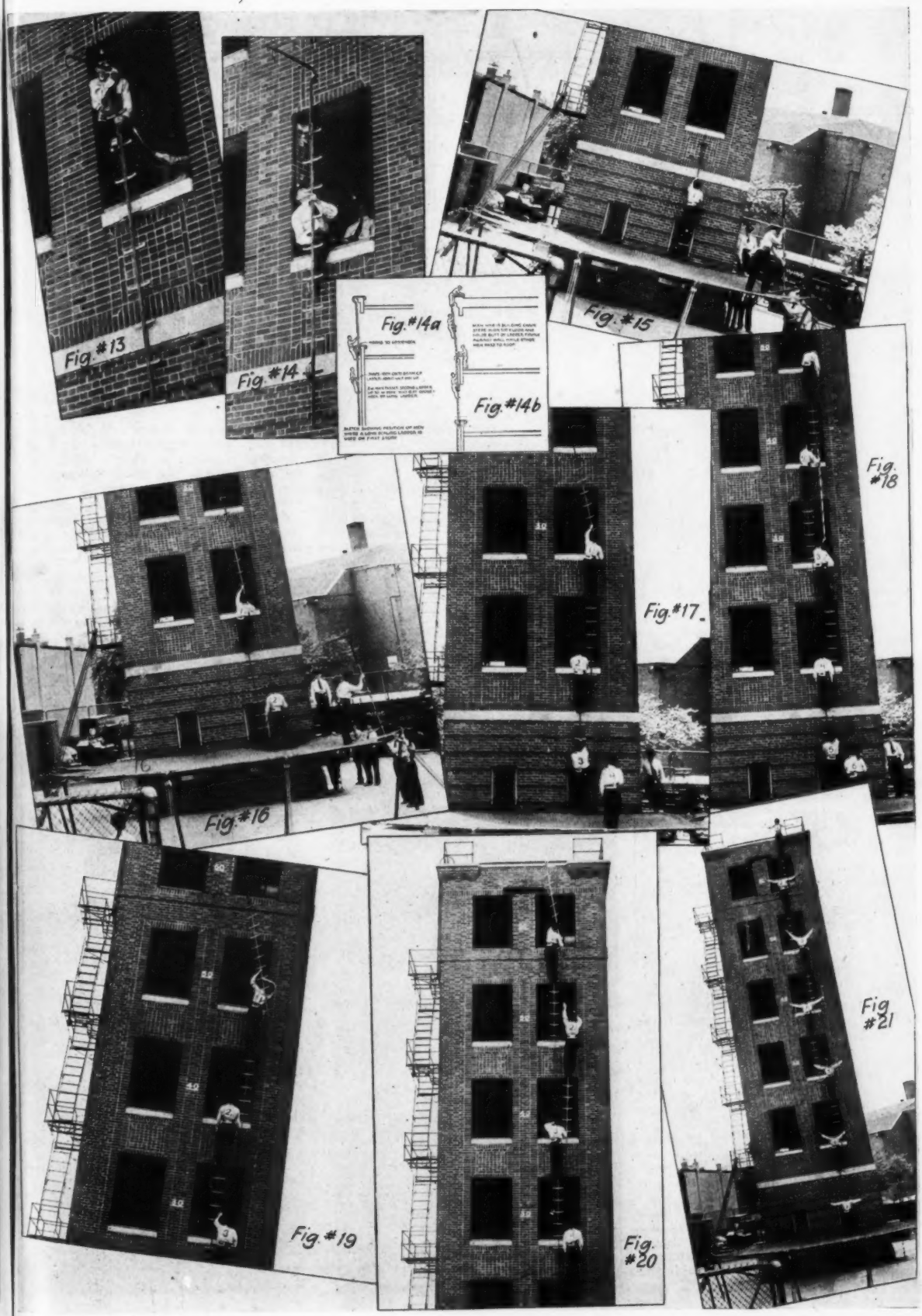


Fig. #13
Fig. #14
Fig. #14a
Fig. #14b
Fig. #15
Fig. #16
Fig. #17
Fig. #18
Fig. #19
Fig. #20
Fig. #21

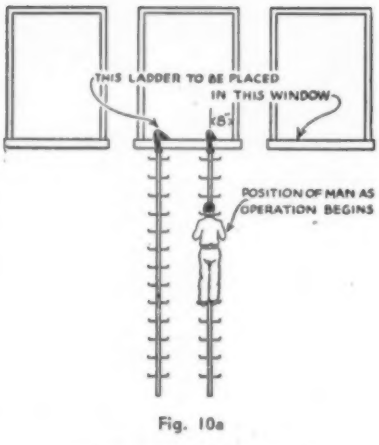


Fig. 10a

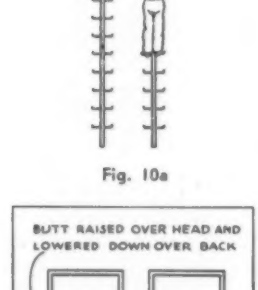


Fig. 10c

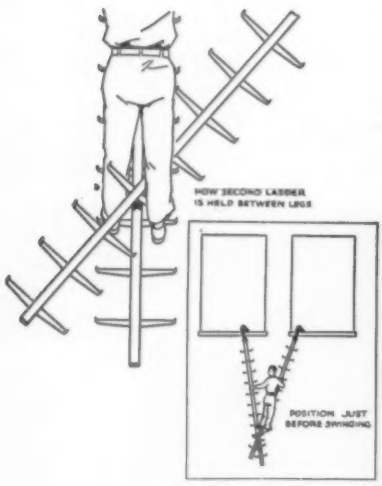


Fig. 10d

When the chain of ladders has reached the roof, and the top ladder is hooked over the cornice or parapet, the man building the chain steps in on the top floor and holds the butt of the ladder going over the roof firmly against the wall of the building with both hands until the climbers have passed over the roof. Diagrams 14a and 14b will help to illustrate this detail.

When passing ladders up or down the building, the hook on the ladder should be kept flat against the wall, preferable the hook facing to the right side. As mentioned previously, some departments prefer to turn the hook out at right angles with the building wall. This, in the opinion of many, makes balancing more difficult, increasing operations, and does not provide the degree of safety that is afforded when

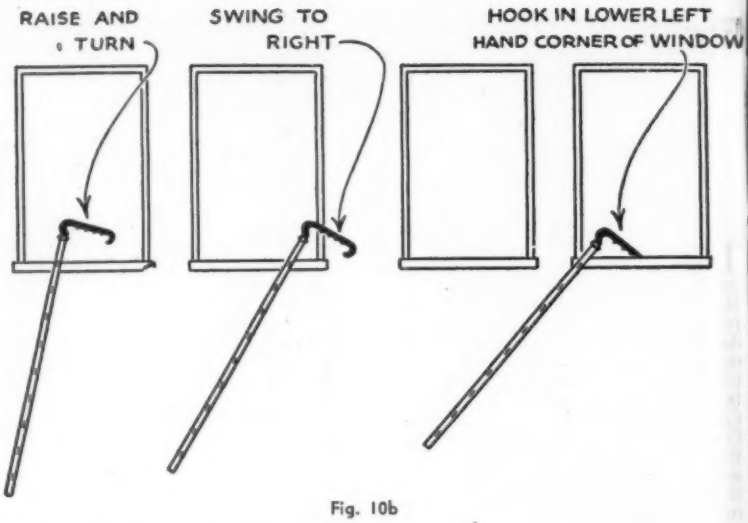


Fig. 10b

the hook is closer to and parallel with the wall. In this position, the ladder and hood can be rested in against the wall, whereas, in the other position, with hook out, it can more easily get out of hand.

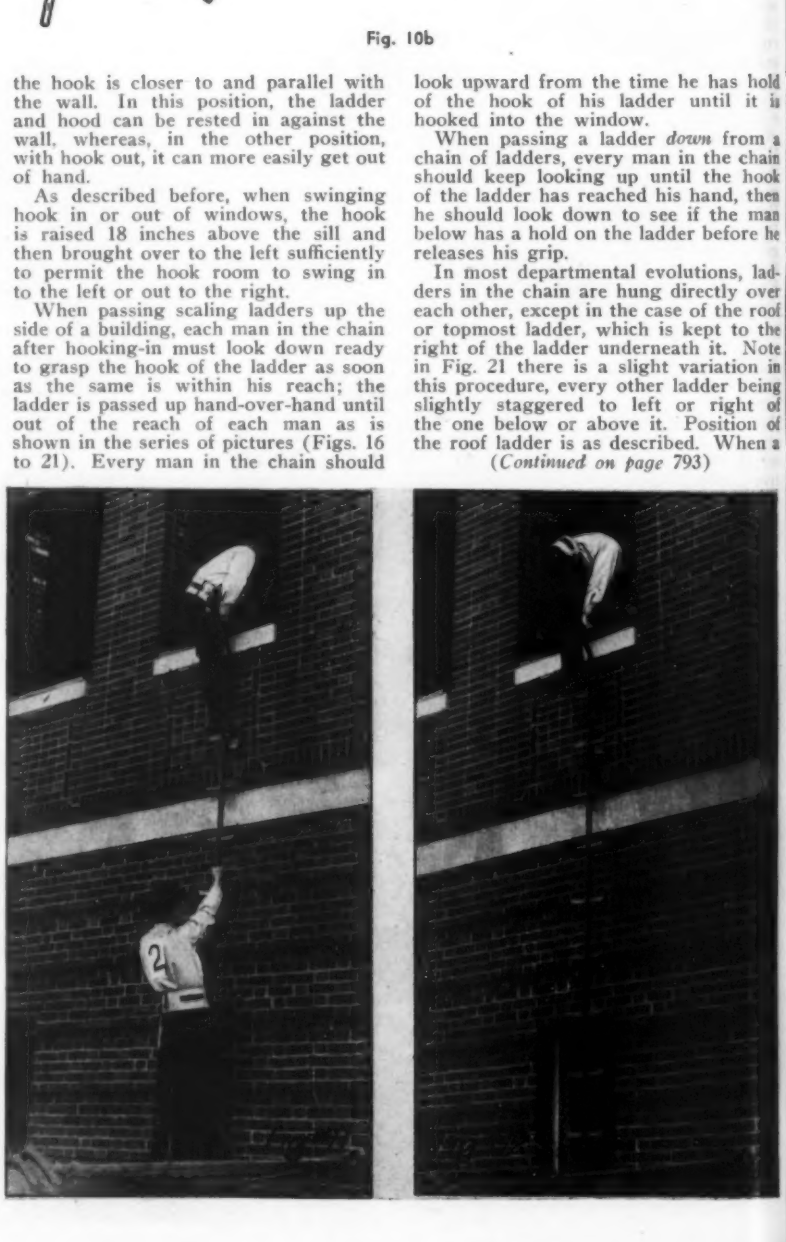
As described before, when swinging hook in or out of windows, the hook is raised 18 inches above the sill and then brought over to the left sufficiently to permit the hook room to swing in to the left or out to the right.

When passing scaling ladders up the side of a building, each man in the chain after hooking-in must look down ready to grasp the hook of the ladder as soon as the same is within his reach; the ladder is passed up hand-over-hand until out of the reach of each man as is shown in the series of pictures (Figs. 16 to 21). Every man in the chain should look upward from the time he has hold of the hook of his ladder until it is hooked into the window.

When passing a ladder *down* from a chain of ladders, every man in the chain should keep looking up until the hook of the ladder has reached his hand, then he should look down to see if the man below has a hold on the ladder before he releases his grip.

In most departmental evolutions, ladders in the chain are hung directly over each other, except in the case of the roof or topmost ladder, which is kept to the right of the ladder underneath it. Note in Fig. 21 there is a slight variation in this procedure, every other ladder being slightly staggered to left or right of the one below or above it. Position of the roof ladder is as described. When a

(*Continued on page* 793)



ELMIRA FOG NOZZLE TESTS DEVELOP INTERESTING DATA

First Efforts to Determine Discharge Characteristics of Present-day Fog Nozzles Prove Fruitful

THE fog nozzle tests, which drew editorial approbation of this Journal in its March, 1952, edition, got under way on July 8 last after preliminary meetings of the Committee established to conduct the operations were held at Maryland University on February 19 and April 18. This Committee is actually a sub-Committee of the Fire Department Committee which jointly represents the International Association of Fire Chiefs and the National Fire Protection Association. It is composed of Robert C. Byrus, Chairman, Director Fire Service Extension, University of Maryland, College Park, Md.; Herbert R. Bogardus, Chief Engineer, New Jersey Inspection Bureau; Fred Shepperd, Editor, Fire Engineering (represented by Chief Roi B. Woolley, Assistant Editor); George L. Swan, Assistant Chief Engineer, National Board of Fire Underwriters; Boyd Hartley, Engineer of the same Board; Hubert Walker, MFA Sales Engineering, American-La-France-Foamite Corporation, Elmira; and Warren Y. Kimball, Manager, Fire Services Department, National Fire Protection Association.

The sub-committee was empowered to collect and analyze all possible data, including nozzle manufacturers' literature, on the subject of fog nozzles and their application to the fire service. This study disclosed that the correlated material failed to provide desired comparative information on fog nozzle discharges at various angle patterns and pressures. The sub-committee was also empowered to achieve these objectives: (1) to establish reliable test procedures to determine the quantity of water discharged by various fog nozzles at identical pressures and angle settings selected by the committee for standardization purposes; (2) To photograph fog discharge patterns against a standard background so as to get data giving identical indications of relative water concentration throughout the fog pattern and range of discharge, and (3) to develop a comparative method to determine the reach beyond which any given fog nozzle delivers a stated percentage of its capacity.

Consultation with the Underwriters' Laboratories, Inc., and the N.F.P.A. Committee on Water Spray, and other interests, indicated this was desirable information to be obtained.

The American - LaFrance - Foamite Corporation, through Hubert Walker (committee member), offered use of their facilities and testing ground at Elmira, N. Y. These were accepted with the proviso that all control of the studies be maintained by the sub-committee responsible. The Company readily agreed, and gave every possible assistance, including the building of the test facilities; furnishing pumping apparatus, supplies and equipment, taking photographs; and assignment of manpower to the project. Without this strong support the studies could not have been made.

Photo courtesy Hubert Walker

Some of the participants in the first week's fog nozzle tests at Elmira. Reading left to right: Warren Kimball, Editor, *Fireman;* Boyd Hartley, National Board of Fire Underwriters; Don O'Brien, New York Bureau of Fire, Division of Safety; Roi Woolley, Assistant Editor, FIRE ENGINEERING; Chief Henry Thomas, International Association of Fire Chiefs; Robert Byrus, University of Maryland; Deputy Chief Arthur Harris; John Hillsley, Jr., American-LaFrance-Foamite Corp.; Herbert Bogardus, New Jersey Inspection Bureau; Hubert Walker, American-LaFrance-Foamite Corp.; George Swan, National Board of Fire Underwriters.

Photo courtesy Hubert Walker

Test for discharge, using backboard and run-off trough. A ladder pipe was fixed to a movable platform and mounted on a truck in order to establish the best distances for tests of discharge. Here water is drawn from the splashboard via trough to a measured receptacle. Note method of keying photographic tests.

To determine the quantity of water discharged by the various nozzles on a comparable basis, the sub-committee selected, as standard, nozzle pressures of 50, 100 and 150 PSI, and angle patterns of 30, 60 and 90 deg. where fog patterns were adjustable. This made nine studies of each adjustable type nozzle. In addition, each manufacturer was asked to recommend the desirable operating conditions he felt best suited to his particular nozzle.

Nozzles were sent to the Fire Service Extension, University of Maryland by various manufacturers, and taken to Elmira by the Chairman where they were retained in a locked cabinet, care being taken to see that security was maintained, and models were not damaged.

Pressures were measured by a calibrated gage placed immediately behind the nozzle. A special gage fitting kept surges and inequalities in pressures to a minimum. Gages were tested at intervals to assure continued accuracy.

Initial tests to determine GPM discharge were conducted by timing duration of nozzle flow into a calibrated tank, where amount of water could then be measured. This procedure was found to have disadvantages and was later changed so that water was pumped out of a calibrated tank, two means of meas-

urement being used: (1) Length of time to pump a stated quantity of water measured on stop watches; (2) amount discharged in a stated time was noted on a calibrated water column. For small capacity nozzles, measurement tests were run for several minutes to minimize any possible error. For large capacity nozzles, several stop watches were used to strike an accurate time lapse of necessarily short duration. Accurate averages were secured by running several tests.

Patterns made at selected pressures were photographed against a standard background, as shown in the illustrations. The angle of discharge was measured by calipers adjusted according to angles measured by a protractor. The point at which the angle was measured was selected as the first 6 to 8 inches after the water left the nozzle. This was done because the velocity of discharge caused some patterns to bend sharply, the pattern edge taking a rounded or a ragged form. To photograph the patterns against the background, a ladderpipe was mounted on a secure bracket to hold 2½ and 1½-inch lines. The boosters, or 1-inch size, was held by hand. An angle of 12 deg. was selected to show the maximum pattern against the background and to help counteract the effect of gravity. This angle was measured by a protractor and maintained throughout. A stream straightener was placed on the ladder pipe to smooth out water flow.

Photographs, of which over 900 were made during the tests, were timed at 1/250th of a second to stop the movement of water insofar as possible.

Reach of fog streams being an important matter, the sub-committee decided to accept as the effective reach, the point at which 90 per cent of the discharge (fog) could be collected and measured.

To measure this, a back drop 15 ft. x 15 ft. was constructed next to and at right angles with, the cross-hatched back board used for photographic measurements. Side boards 8 inches deep were placed around the top and sides of the panel to intercept the water discharged from the nozzles under study. A large, slanted trough at the bottom led the water to a tank where measurement of column could be made.

Photo courtesy Hubert Walker

Setting up the equipment for the fog nozzle tests. A bit of "cutting and fitting" to set up the complicated procedures for volume, capacity and pattern tests. Reading, left to right, Kimball, Hartley, Swan (in background), Thomas (back to camera), Bogardus (face hidden), Woolley and Harris.

A number of difficulties were encountered in this measurement of volumn by means of the splash back and drain, chiefly due to the entrained air in the discharge, and to windage, which deflected the pattern. Experiments were conducted mounting the nozzle and its holder on a truck, moving it to locate the nozzle at different positions from the board. In one attempted solution of the problem, a small mesh screen was placed over the backdrop but this was ineffective. As a result, efforts to determine effective reach were abandoned pending availability of more adequate facilities. It was tentatively agreed to conduct further tests of this phase, and others, at the University of Maryland at a later date.

Nothwithstanding these initial difficulties, the tests completed led to certain conclusions and recommendations. Among these are the following:

1) Nozzle pressures of 50 PSI are too low for practical use in fog nozzles now commercially available.

2) Wide angle patterns of a hollow-cone type may be less desirable for use in ordinary fire fighting operations. Some nozzles do not permit an adjustment of 90 deg., while others had a radical change occur in the pattern at this point.

3) The sub-committee erred in not determining the total discharge of those nozzles which feature the simultaneous discharge of a solid stream and a fog. Such combined discharge could be so great as to seriously tax the water carrying capacity of the supply hose line.

4) Observable discharge patterns varied from a coarse spray to a fine mist under comparable conditions. In some nozzles the water remains in large droplet size even at pressures of 150 PSI.

5) High pressure type fog nozzles (for purposes of the report considered as those which operate at pressures above 500PSI) were not studied under sufficiently favorable conditions to warrant inclusion in the report (the tests indicated, however, the wisdom of further study).

6) Some nozzles presented a discharge pattern resembling the ribs of an umbrella by concentrating water in jets. This characteristic was noticed in both adjustable and fixed pattern type fog nozzles.

7) Some nozzles were designed so there was a distinct side thrust.

Photo courtesy Hubert Walker

"Good to the last drop" was this contrived method of measuring volume discharge by means of a gauged tank. Nozzles were inserted in a section of suction sleeve, the discharge time, then measured on gauge.

Recommendations

From the tests and conclusions, the sub-committee will offer these recommendations:

First, it is the considered opinion of the sub-committee that there is a serious need for a comprehensive research program that will thoroughly explore the entire field concerning the use, design, characteristics and techniques of using "fog" and "fog nozzles." Some of the desirable information not now available includes:

a) The reaction, or 'kickback', under various pressures. Some nozzles have a discharge rate that makes the nozzle difficult to hold, as well as causing high friction loss in the supply hose line. Other nozzles have engineering designs that affect the reaction one way or another.

b) Determination of the total water capacity which each size hose should be expected to carry. Some nozzles are now

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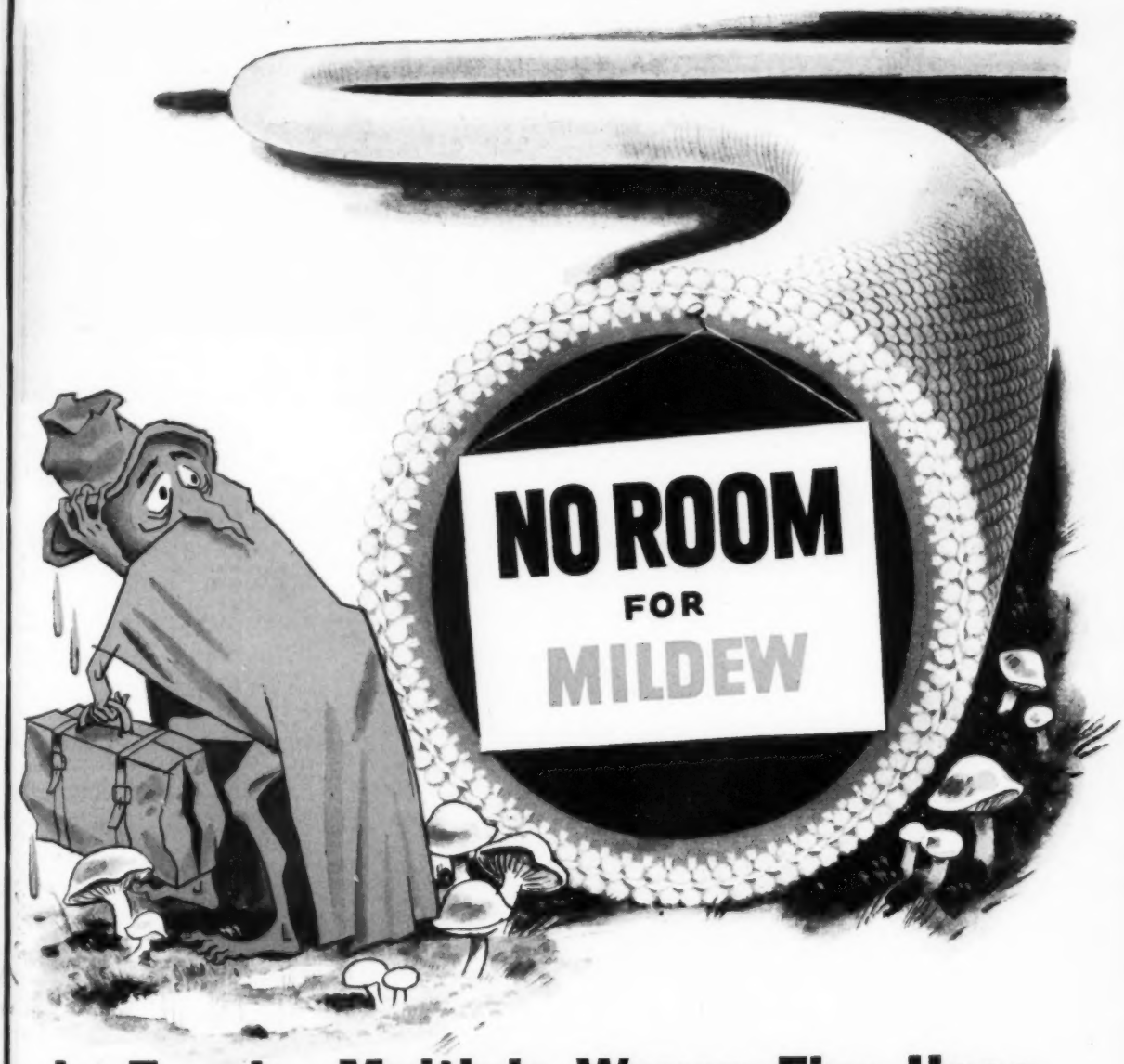

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New London Mobilizes for C.D. Exercises

On Sunday, May 25th, over 100 pieces of fire fighting equipment converged on the New London, Connecticut, area in the state's greatest civil defense test. The primary purpose of this exercise was to demonstrate and test the fire control strength and capabilities of the fire fighting services in eastern Connecticut. The secondary purpose was to determine the extent and strength of civil defense organization in other essential services.

Events in a chronological order were as follows:

7.00 A.M.—Yellow alert.
7:30 A.M.—Red alert.
7:40 A.M.—"Atom bomb" dropped over Thames River, near New London.
7:45 A.M.—Call to Radiological Teams and Rescue Squads for mobile support.
8:00 A.M.—Call to Fire Fighting, Health, and Red Cross Services for mutual aid and mobile support.
9:00 A.M.—Call to Civil Air Patrol for picking up and dropping or landing medical supplies.
11:00 A.M. to 1:00 P.M.—Assembled at U. S. Submarine Base for water pumping demonstration and lunch.

Note—All alerts were simulated.

Within two hours after the original alert, a total of 1,360 firemen, manning 103 pieces of equipment, and representing New London, Windham, Tolland and Middlesex Counties in Connecticut and Washington County in Rhode Island, had been mobilized and were actually at work controlling imaginary incidents. All operations were carried out in a steady downpour of rain.

Upon completion of the various exercises, apparatus proceeded to the U. S. Submarine Base in Groton, where 88 pumpers assembled along the waterfront and sent a total of 167 streams of water into the air in a spectacular demonstration. Off shore three fireboats added their bit to the display.

Brig. General William Hesketh, state civil defense director, Commander Robert H. Barnes, area civil defense director, and Fire Chief Henry G. Thomas of Hartford, representing the International Association of Fire Chiefs, all highly commended the firefighters for their organization and training.

The equipment was divided into four mutual aid units commanded as follows: first unit, Chief Thomas H. Shipman, civil defense coordinator for New London County, and Deputy Chief Frank Sullivan of New London; second unit, Chief Herbert P. White of Groton; third unit, Chief Thurston S. Howard of Waterford; and fourth unit, Chief Leno Vescovi of the Submarine Base.

—WILLIAM C. PECK

U. S. Air Force Photo

Said to be the "last word" in airport fire stations, the new headquarters of McChord Air Force Base, Wash., can house eight fire vehicles and has its own lookout tower 70 feet above ground.

Latest in Airport Fire Stations

As a rule, fire stations of the nation's military and civilian airports are anything but attractive and utilitarian. An exception is the new fire station at McChord Air Force Base, Washington, recently placed in operation.

The McChord Fire Department was founded over 11 years ago. At that time, as now, A. J. McCarthy was fire chief. Today, however, he presides over a streamlined headquarters, and a fire force as large as that of a small city.

Prior to construction of the new fire station the local department operated three fire houses. Eight vehicles are now quartered in the one new structure, with its eight separate apparatus exits, and its own airport observation control tower. There is also one fire fighting unit located at the north end of the huge field.

The main floor of the new station has eight truck stalls, a wash room, modern kitchen, combination dining-day room, sleeping quarters to accommodate 36 men, a modern shower room, chief's offices and a shop which can be utilized for first and second eschelon maintenance.

On the second floor are to be found rooms for a training section and class room procedures. Atop the building, nearly 70 feet above ground, overlooking the entire runway area, is a lookout tower. From here firemen on duty can spot a crash or accident at any position on the runway, and with a touch of a button and complete inter-com facilities which are installed, alert the crash crew and have them on the scene in a matter of seconds.

Photo by William C. Peck

Water pumping demonstration at U. S. Submarine Base as climax to civil defense test. View looking south shows about two-thirds of the pumpers participating.

Fire Prevention Week Oct. 5-11

President Truman called on the Chamber of Commerce of the United States, the National Fire Waste Council and other organizations to wage a "crusade against the loss of life and property resulting from fires."

Mr. Truman, in proclaiming October 5-11 as Fire Prevention Week, said that "the nation can ill afford the needless waste of nearly a billion dollars in irreplaceable materials, facilities, and resources."

The Chamber, through its affiliated organization, the National Fire Waste Council, again is taking the lead in planning nationwide observance of Fire Prevention Week.

The program will include community fire prevention education, fire-fighting demonstrations, and inspections of local fire department facilities, industrial plants, commercial buildings, homes and schools.

The bulk of work for Fire Prevention Week will be carried on by the 37 national organizations affiliated with the National Fire Waste Council and the more than 1,300 fire prevention committees of local chambers of commerce.

No. 2 of a series of 6

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Short Cuts and Gadgets

ANOTHER HOSE LOADER IDEA

From Arthur J. Wengertsmann, a member of the Waterbury, Conn. Fire Department, comes still another idea for a hose loader, and a "Combination Hose Rack and Hose Loader" which we gladly pass along to the fraternity.

Hose loader.

The purpose of these "Short Cuts," according to Brother Wengertsmann, is to save time and manpower, "while enabling the hose to be kept dry at all times."

The features of the "Hose Loader," illustrated herein, are given thusly:

1. Place a 50-ft. length of any standard hose on the wheel, thereby facilitating the loading of the apparatus, as the hose is easily fed from the rotating wheel, making it unnecessary to drag the full length along the apparatus floor (preventing wear and tear on the hose itself).

2. Three men can operate it very handily: (a) No. 1 man loads the wagon; (b) No. 2 man feeds the hose from the loader; (c) No. 3 man makes the connections with the help of the No. 2 man if so desired.

By this means the dry hose at no time comes in contact with any wet floor. This loader proves very useful and handy where working space is limited.

The "Combination" is a variation of the "Hose Loader" with a movable storing rack attached. As might be expected, it requires a little larger working area.

Readers are assured by Contributor Wengertsmann that he will gladly furnish dimensions of the latter device, upon request.

* * *

CONVERTING ALARM CLOCK TO FIRE NOTIFIER

Safety from fire for sleeping persons is provided with an electric clock which rings with an alarm if the temperature of the bedroom reaches an unsafe degree. The "fire-alarm" part of the device does not interfere in any way with its normal operation as a timepiece. It utilizes, however, the same sound producer employed when the device acts as a simple alarm clock.

Operation as a fire-alarm depends upon the use of a material which changes from a solid to a fluid at a predetermined temperature above normal room temperature. Various wax compositions and metal alloys are suitable for the purpose. The temperature at which the fire alarm goes off depends upon the material used. Patent 2,552,331 was issued to Anthony H. Lamb, Hilside, N.J., for this invention.

Science News Letter, May 19, 1951

* * *

SUGGESTS A GATE IN THE LONG LINE

The idea is not particularly new, but is worth repeating, just in case some of our readers have never thought of it. It comes from Raymond G. Lee, of Rochester, who insists it is a "short cut" saver of time if the need arises where extra lengths of hose are wanted on long lines such as in fighting grass, field or dump fires.

Brother Lee advocates placing a hydrant gate valve on the line about midway between pumper and nozzle. Thus it will eliminate shutting down the pumper when it is desired to add extra lengths of hose on all long lays. It will also cut down the extra "leg work" of running back to pumper to shut down a line, and returning to the nozzle.

We don't know whether it's necessary to add the gate midway in the line, but the idea is practicable. Of course, the ultimate answer to the problem of getting instructions to pump operator some distance from the nozzleman, is the pack-set short wave or "walkie-talkie" radio.

* * *

OLD TUBES FOR BACKFIRES

From *Popular Mechanics,* June, 1951 comes a "short cut" sent us by an anonymous reader. The item suggests that excellent fire starters for lighting camp fires in wet weather can be made by cutting an old inner tube into 3-in. squares. Such a piece will burn for about 10-minutes and will ignite damp firewood, it said. If the rubber is damp, it can be dried by rubbing between the hands for a minute or two. In an emergency, the burning rubber can be impaled on a stick for use as a torch.

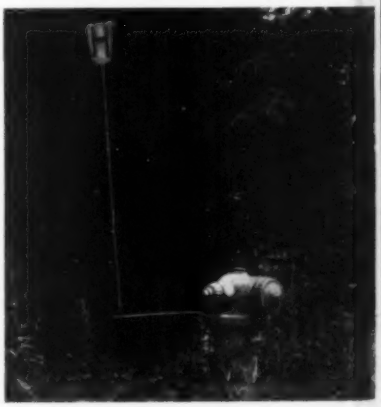
Our contributor adds this: if an old tube is good for starting campfires, why can't it be used for starting backfires in field and forest fires fighting?

Well, we dunno, but we pass along the idea for what it's worth.

* * *

"H" STANDS FOR "HYDRANT"—AND "HERE"

There is almost no end to the various methods used in different communities to assist the fire department in locating hydrants at night or in deep snow.



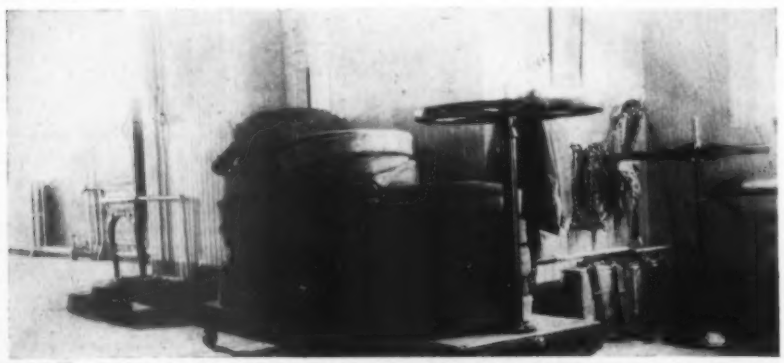
Hydrant marker at Lunenburg, Mass.

The accompanying photo shows the scheme used in the town of Lunenburg, Mass. The target, with the letter "H" in luminous scotch tape, is welded to a one-half inch iron about six feet long which is in turn fastened to a three foot piece of strap iron which is bolted directly to the hydrant, giving the upright enough offset to clear a hydrant wrench.

The main advantage of this device is that it is fastened directly to the hydrant so that in digging out after a snow storm, if one follows the rod down, he cannot miss the hydrant.

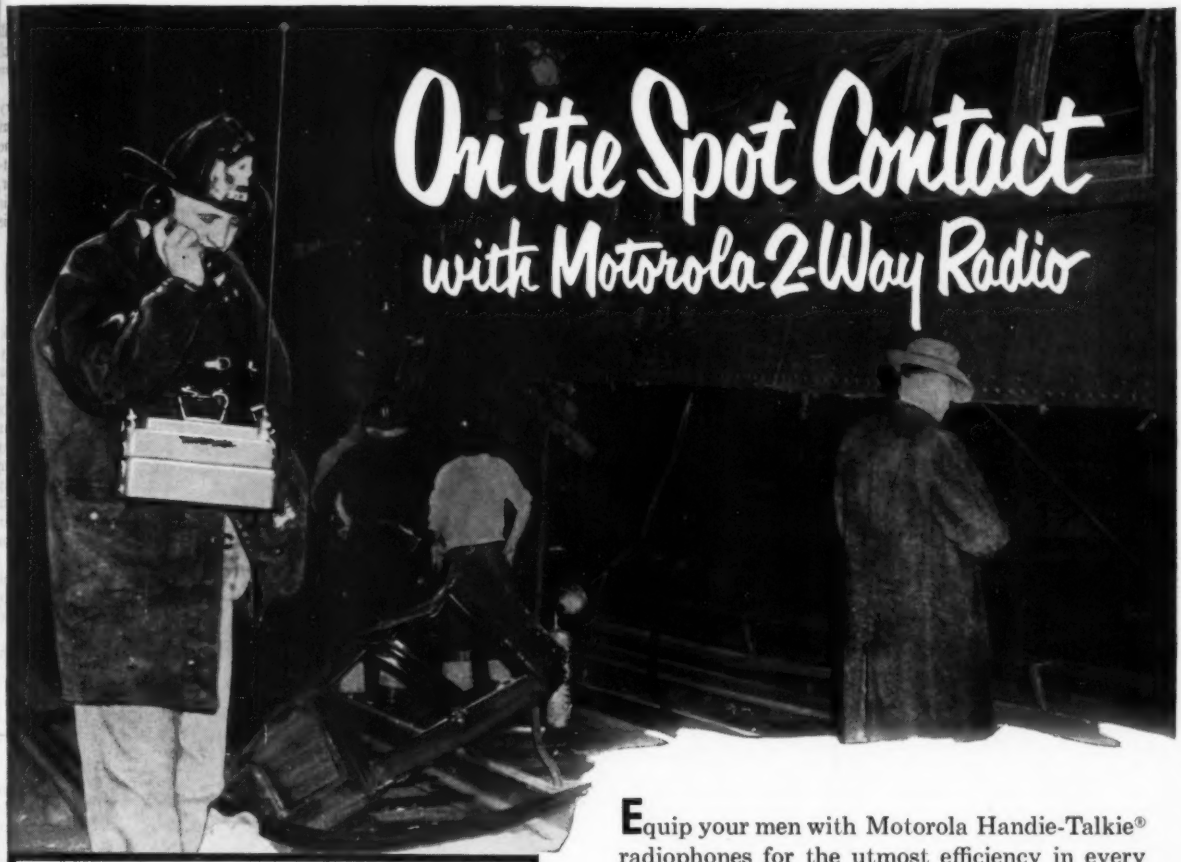
Although this device appears to be quite susceptible to vandalism, the local authorities claim to have little trouble on that score.

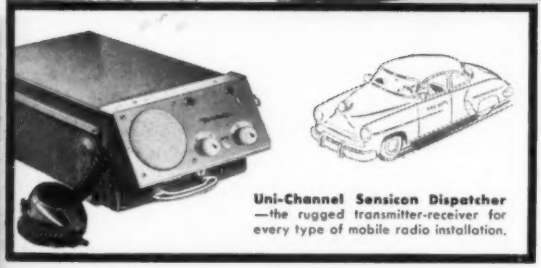
HENRY T. HANSON.



Combination loader and rack. This rolls to car and loads the hose in wagon. Arrow points to the portable loader.

On the Spot Contact with Motorola 2-Way Radio





Uni-Channel Sensicon Dispatcher—the rugged transmitter-receiver for every type of mobile radio installation.

Portable Pack Set—long-life battery-operated-2-way radio for on-the-spot contact.

Pack Set Power Supply—for operating Pack Sets from 117-volt AC lines and 6-volt DC batteries. Here's extra value and greater versatility for your system!

Equip your men with Motorola Handie-Talkie® radiophones for the utmost efficiency in every crisis. Call for men and equipment with the split-second timing so essential to modern fire-fighting technique. Rugged, weather-proof Motorola mobile systems are now bringing lightning communication to almost three-fourths of the fire departments in the country. Handie-Talkie 2-way radios and portable Pack Sets link with mobile units, extending radio coverage to the most remote and inaccessible places. For fast action, flexibility and complete radio networks Motorola offers you outstanding mobile radio value. And remember . . . specify Motorola for lasting performance, minimum maintenance and truly obsolescence-free equipment. Write today for full information on radio equipment for your system.

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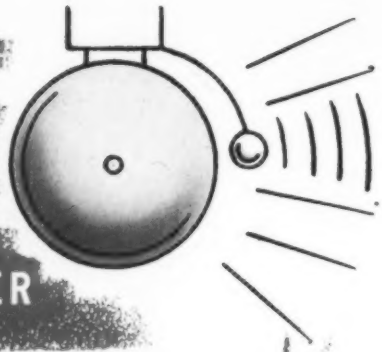
NO "FIRE-DRILL" NEEDED with THIS EXTINGUISHER



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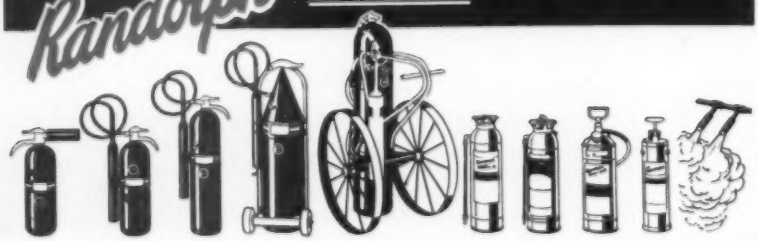
One glance tells you just how the Randolph operates—no instructions, no explanations necessary! That's why *anybody* can get a Randolph into action fast! No valves to turn, no nozzles to adjust; just point and press your thumb and Randolph's cloud of snowy CO_2 kills fire instantly!

Non-damaging Randolph CO_2 evaporates without a trace, is non-toxic, won't conduct electricity, deteriorate or freeze. And *all* Randolph Models are Underwriters' Approved.

A COMPLETE LINE OF EXTINGUISHERS AND AUTOMATIC SYSTEMS

Learn how Randolph gives your plant panic-proof, split-second protection against flammable liquid, electrical and other hard-to-handle fires! Write Randolph Laboratories, Inc., 19 E. Kinzie St., Chicago 11, Illinois.

Randolph SIMPLIFIED FIRE EQUIPMENT



Among the Buffs

By Paul C. Ditzel

THIS vacation month has brought some of the Chicago fans out to look over the Los Angeles situation. First came Max O'Brien of the Chicago office of American LaFrance. Max was particularly impressed with the sirens used by the Los Angeles Receiving Hospitals. When he left he had one of the sirens mounted on his flivver.

Steve Lasker, ace photographer of the Chicago fire doings, spent the greater part of one month in the city. His visit, which was mainly romantic, resulted in your correspondent being brought up to date on the various Chicago happenings. Talking with Max and Steve made me homesick, somewhat, for the Windy City. Chicago has been relatively quiet during the summer months, but this is usual for this time of year.

Steve brought along some of his photographs. His shots of some of last Winter's five baggers during the unusually heavy snowstorms were especially cooling for the summer heat of Los Angeles. Steve was first photographer in on the 63rd and State Street disaster of several years ago when a gasoline truck and a loaded streetcar collided. His action shots won him several prizes and quite a name. Two of them appeared in LIFE Magazine. Steve is now doing photo work for the National Broadcasting Company's Chicago television outlet.

From West Point and Fire Chief George Bertsch comes a shiny gold badge in recognition of my appointment as Honorary West Point Fire Chief. For a former Marine Corps Sergeant, it should come to this!

Chief Bertsch heads one of the most historic fire departments I've come across. His area takes in some of the most historic points in early American history. A fire loss at any of them would not be measurable in money.

He writes that his boys recently had a worker on Constitution Island, a history spot of Revolutionary Days across from West Point on the Hudson River. At this point a big chain was stretched across to keep the British fleet from coming up the Hudson to destroy West Point.

"Had a brush fire there with peat bog and dry brush burning at 4:00 p.m. on July 2 and was extinguished on July 4th at 5:30 p.m.," Chief Bertsch writes.

"Laid in a line of 60 lengths from the river and utilized 25 back pack Indian pump extinguishers to put out this tough one with all the deer flys, etc., including the heavy smoke in 96-degree temperature. The blaze certainly took the starch out of the boys.

"This Constitution Island is an historic spot under the care and maintenance of West Point and has the second oldest house in the United States. The house has been converted into a museum and there are many relics on exhibition, so any fire could possibly destroy all this historical display."

James A. Townes, Jr., of the Palo Alto Plantation, Minster City, Miss., is a would-be fire fan He's looking for a buff club somewhere in Mississippi to tie in with.

It's been some time since this column mentioned the work being done by Don Shelburne, editor of the National Fire

take an easier, safer, faster way down

When seconds count there can be no question about speed, but when you can combine *speed* and *safety* and still slide *faster*, we suggest that the old brass pole is outmoded.

Why come down "hanging on" when it is easier and safer "sitting up?" In this way wrenches, sprains, and even broken bones can be avoided without resultant loss of time and manpower. Obviously, accidents are costly. A Potter Slide means no waiting at the top, no danger in descent, and just as fast a take-off at the bottom.

install this POTTER SLIDE

This simple, easy, safe chute eliminates all hazards, requires only 36 square feet of floor area, can be installed anywhere in the station and nobody can get hurt coming down even if they are half asleep. We are now installing three of these modern, quick descent slides at Mishawaka, Indiana. . . . Send this coupon today for full information.

POTTER FIRE ESCAPE COMPANY
6114 N. California Ave.
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Gentlemen:

Without obligation we will be glad to know more about the Potter Fire Slide for fire houses.

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Letter Perfect

—and we mean every letter *is* perfect —see for yourself.

The phrase "Letter Perfect" is often used in referring to Blackinton Badges but more specifically we mean sharp, clean, carefully formed letters—and that's what you can be sure of when you ask for BLACKINTON. Each letter is carefully struck by hand by experienced badge craftsmen. The right tools — the right touch — plus a century of badge manufacturing experience ensure you of the finest in badges.

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BADGES for Police, Fire, Town, City, County, State Officials, Civilian Defense, Plant Protection, Junior Police; also Transportation badges — Bus, Truck, and Taxi.

Fan Register. The magazine, excellent for its high quality photographs and nationwide fire information, is running into some heavy smoke. Don could use a few more helping hands to man the lines. You fans can best help by sending along your $2.00 a year subscriptions to the monthly magazine. Write Don at 7614½ Seville Ave., Huntington Park, California.

Jesse Stemple, Jr., chief engineer of the Washington Fire Company No. 1, Conshohocken, Pa., sends along a color picture of his outfit's chrome yellow aerial ladder. It's quite a rig and the photo that Jesse sent along shows the ladder company, adorned with flowers, at the Conshohocken Centennial, May, 1950.

"The members of this Company feel you have paid us a great compliment with the description you wrote about our quarters, of which we are very proud. We extend to anyone who may be in this area a cordial welcome to visit us and see for themselves that our door is open at all times," writes Jesse. Brother Jack Robrecht, 5113 Willows Ave., Philadelphia 43, Pa., called the Washington Fire Company to my attention.

Jesse writes that his father, mentioned in my earlier column, retired last June 28 after 44 years as Chief Engineer and 38 years as paid driver with a record of no accidents. Jesse writes that their rigs were never serviced at a garage.

Jesse says the following companies have rigs with other than standard red:

Montgomery of Norristown, Blue; Goodwill of Bridgeport, Green; Bryn Mawr, Green; Elkins Park, Cream; Empire of Pottstown, White; and Keystone of Boyertown, Lemon Yellow.

Jesse says their chrome yellow aerial is an American LaFrance 75-foot with a 275 horsepower V-12 engine.

Ed R. Damaschke, secretary of the Detroit Fire Buffs Association, says the new 1952 officers of the association are: Ray Carle, 17135 Ilene Ave., Detroit 21, president; Edgar Denison, vice-president and Ed, himself, secretary.

Let's hear from you buffs. I'm still turning out from 2242 Princeton Ave., Los Angeles 26. My rewrite desk remains in the same corner of the Associated Press, P. O. Box 2416, Terminal Annex, Los Angeles 54, Calif.

New Jersey Fire College, October 16-19

An expanded program of firemanship training to meet the needs of fire fighters of the state of New Jersey, will be conducted at Fort Dix by the New Jersey State Fire College on October 16-17-18-19, it is announced by George C. Miller, President of the College, which is a division of the New Jersey State Safety Council. The weekend sessions will be open to paid and volunteer firemen and members of plant brigades.

The program will cover instruction in all phases of fire fighting and fire protection as well as in the use and maintenance of modern fire fighting equipment. The sessions will also include classroom and field work, demonstrations of all types of fire extinguishment, drills and demonstrations, and intensified instruction in 15 elements of fire control. Personal participation and individual instruction in all outdoor field work for all firemen who register will feature the sessions.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of August, 1952.

Month Ending August 31, 1952

Benton, Ark.—East Side Elementary School destroyed. Lightning.
Lexa, Ark.—Ice storage plt. of City Products Co. damaged.
Arcata, Cal.—Holmes-Douglas sawmill destroyed. Sparks.
Bishop, Cal.—Mountain Home of Nate Milnor of Silver Lake, 60 miles north, destroyed.
Brawley, Cal.—Whse. of Holly Sugar Co. destroyed. Spontaneous ignition.
Corcoran, Cal.—Cutter's Grain & Milling Co. plt. damaged.
Cotati, Cal.—Three whse. and mill bldgs. of Prizelle-Enos Feed Co., eight miles south, destroyed.
Edenvale, Cal.—Richmond-Chase Co. dried fruit plt. No. 1, destroyed.
Forest Hill, Cal.—Sawmill of Forest Hill Lumber Co., a mile south, destroyed.
Hayward, Cal.—Midget Club and two stores, destroyed.
Lomita, Cal.—Chandler Sand & Gravel Co.'s washing plt. destroyed.
Los Angeles, Cal.—Plt. of Hy-Pro Machine Products Co. damaged.
Los Angeles, Cal.—Overly Mfg. Co. door and sash plt. destroyed.
Merced, Cal.—California Poultry Producers Association whse. destroyed.
Montebello, Cal.—Planing mill at Phipps Lumber Co., destroyed.
Roseville, Cal.—Garage on Placer County Fairground destroyed.
San Francisco, Cal.—Tri-Pak, Inc., gun cleaning plt. damaged. Degreasing machine.
Modesto, Cal.—Canned food whse. of Stanislaus Food Products Co. destroyed.
San Jose, Cal.—Garage of Pacific Gas & Electric Co. and 100 trucks destroyed. Cleaning fluid blast.
Tulare, Cal.—Main auditorium, four commercial bldgs., community bldg. and automobile section at Tulare County Fairground destroyed.
Kremmling, Colo.—Kremmling Timber Co. sawmill, a mile southwest, destroyed.
Dover, Dela.—Bldg. of Matthews Motor Co. destroyed.
Wilmington, Dela.—Storage bldg. operated jointly by Pierce-Elison Petroleum Co. and Triangle Metal Co., destroyed.
Washington, D. C.—The 160-year-old Woodley mansion which was being remodeled by the Maret School, damaged.
Daytona Beach, Fla.—Dry cleaning plt., self-service laundry, genl. store and gift shop at Walker Brothers Shopping Center, destroyed.
Marianna, Fla.—Marianna Drug Store destroyed and Acme Barber Shop and Smith's Fashion Shop, damaged. Gas leak explosion.
Buford, Ga.—Whse. of Bona Allen, Inc., leather processors, destroyed.
Cochran, Ga.—Massae Furniture Co. damaged. Lightning.
Hazelhurst, Ga.—Peerless Cleaners plt. damaged. Boiler backfired, igniting a gallon fuel oil tank.
Hinesville, Ga.—Auxiliary bldg. of Hinesville Ford Co. damaged.
Louisville, Ga.—Grist and feed mill, ice plant and other property of Kelley Development Co., 5 miles northeast destroyed.
Savannah, Ga.—South Manor Tourist Court restaurant destroyed. Defective flue.
Bonners Ferry, Ida.—Crystal laundry of A. J. Ryals destroyed.
Ketcham, Ida.—Casino Club and Cafe damaged.
Alton, Ill.—Paul F. Davis & Sons market destroyed.
Elk Grove Township, Ill.—Barn, carpenter shop and machine shop of Herbert Johnson on farm of Carl Michelotti, on route 72, destroyed.
Fort Wayne, Ind.—Lumber yd. of Charles Hilker & Sons, Inc., destroyed. Discarded lighted match.
Indianapolis, Ind.—Ten frame bldgs. at New York Central Railroad's Brightwood yards, destroyed.
Indianapolis, Ind.—Rytex Co., stationery mfrs., damaged.
La Porte, Ind.—A & P food store destroyed.
Cedar Rapids, Ia.—Bulk plt. of Shellane & Shell Petroleum Co. destroyed. Bottled gas tank blew up.
Dubuque, Ia.—Bldg. housing Hub clothing store damaged. Defective gas heater.
Fort Madison, Ia.—Two bldgs. destroyed and four others damaged. One bldg. destroyed housed A & P Supermarket on ground floor and upper floors were used as whse. by W. A.

Members of the Barnard Fire Department which has outstanding record for efficient operation shown with Ed Masline of Masline Radio and Electronic Equipment Co., who handled installation of monitors.

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LOW COST MONITORS
pay off in
2-way radio

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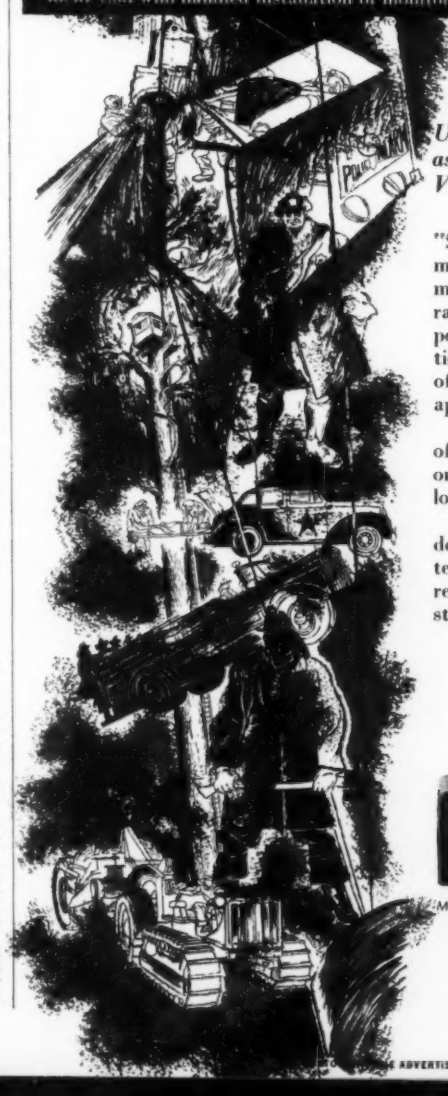
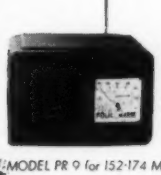


Use of additional listening posts will prov as effective as they have for Fire Chie Van Zile of Barnard, New York who writes

"Speed in mobilizing a volunteer fire depart ment determines the efficiency of that depart ment. Today, thanks to radio and your PR radio receivers, we are able to alert our entir personnel, informing them of the exact loca tion of the alarm, and in most cases a numbe of firemen are at the scene, waiting for th apparatus.

"Our installation is very simple, consistin of a base station, three mobile units installe on the apparatus, and eighty PR 9 receive located in the homes of the volunteers."

"The PR 9 receiver was selected for ou department after several months of exhaustiv testing of various makes, and I would highl recommend them to any department about t start on a similar program."



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MODEL PR 9 for 152-174 MC Band

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ADVERTISING

Preferred power on tank-car heaters or mobile steam generators for heating tank-cars of road oil and bitumen — the world's most widely used single-cylinder gasoline engines on machines and equipment for the construction industry, railroads, oil-fields, and for farms and farm homes.

Whether you build, sell, or use gasoline-engine powered equipment — you are assured of maximum performance and foremost value when the power is a Briggs & Stratton single-cylinder, 4-cycle, air-cooled gasoline engine.

Briggs & Stratton Corporation,
Milwaukee 1, Wisconsin, U.S.A.

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

Sheaffer Pen Co. and the other by Home Furniture Store.

Waverly, Ia.—Four-story bldg. used by Bremer Packing Co., a poultry canning plt. owned by Independence Produce Co., damaged. Lightning.

Barbourville, Ky. — Stinking Creek Community School destroyed. Defective wiring.

Bethesda, Md.—Whse. of Long & Stone Floor Service, Inc., destroyed.

Washington Grove, Md.—Dairy barn on W. Lawson King farm destroyed.

Cambridge, Md.—Dewey & Almy Chemical Co., makers of weather balloons, destroyed.

Charlotte, Mich.—Wilcox-Gay Corp. whse., destroyed.

Cohoctah, Mich.—Cohoctah Church destroyed.

Grand Rapids, Mich.—Stadt Hardware store's storage room and apt. of Mrs. Walter Donker in adj. bldg., destroyed.

Mason, Mich.—Jewett Airport hangar and repair shop destroyed. Sparks from welding equipment.

Middleville, Mich.—Factory bldg. housing Associated Sales and Mfg. Co., producer of magnesium diecast products for Army and Navy, destroyed. Lightning.

Port Huron, Mich.—Former United Brass & Aluminum Mfg. Co. plt., occupied by Normandy Chemical Corp., destroyed.

Atlantic City, N. J.—Bldg., 1516 Atlantic Avenue, damaged.

Kearny, N. J.—Regent Theatre destroyed.

Mount Holly, N. J.—Auto showrooms of Vansant Motors destroyed.

Perth Amboy, N. J.—Dwelling of Dominick Damielle, four adj. garages and a grocery whse., damaged. Gas explosion.

Stanhope, N. J.—Central mill bldg. of Tuttle Judson Lumber Yard in Mt. Olive Township, destroyed.

Buffalo, N. Y.—One bldg. destroyed and four badly damaged in Buffalo's Broadway-Fillmore shopping area. Origin in rear family garage.

Eddysville, N. Y.—Schumann hotel, summer resort on Roundout Creek, Catskills, destroyed.

Geneva, N. Y.—Bldg. occupied by Galante Coal Co. and the Mohawk Paving Co. damaged. Adj. bldg. containing mfg. patterns belonging to the American Can Co. destroyed.

Geneva, N. Y.—Three-story frame bldg. owned by the Murray Moving & Storage Co. damaged. Bldg. contained a large quantity of beer owned by the Venuti Beverage Co. Three freight cars on a rail siding destroyed.

Johnson, N. Y.—John R. Manning & Son feed store destroyed. Explosion.

Mayfield, N. Y.—"The Flame," night club on Sacandaga Reservoir, destroyed.

New Hartford, N. Y.—Peter's Super Market destroyed.

Potsdam, N. Y.—Three barns on Hillview Farm destroyed.

Asheboro, N. C.—Balfour Mfg. Co., a piano finishing firm on Central Falls highway, destroyed.

East Rockingham, N. C.—Deluxe Cleaners destroyed.

Ronda, N. C.—Elementary school destroyed. Lightning.

Wilson, N. C.—New sawmill plt. of Home Builders Supply Co. destroyed.

Ashtabula, Ohio—Lux Foam Rubber Co. plt. destroyed.

Cleveland, Ohio—U. S. Refining Co. plt. destroyed.

Columbus, Ohio—Capital Upholstery Co. damaged. Sparks from machine used to shred baled cotton.

Hamilton, Ohio—Vicki's Frocks store and adj. bldg. housing Dan Cohen Shoe Co. and other businesses destroyed.

Rocky River, Ohio—Three-story Teshera Block damaged.

Warren, Ohio—Central Food Market damaged.

Durant, Okla.—Blue Valley grain mill destroyed and nearby whse. of Durant Lumber Co. damaged.

Forrest Grove, Ore.—Carnation Lumber mill damaged.

Lookingglass, Ore.—Husey and Sims sawmill destroyed.

Medford, Ore.—Shady Cove service station destroyed.

Portland, Ore.—Shaped Midget Tracket Co. damaged. Gasoline flash.

Portland, Ore.—Park Rose Grade School destroyed.

The Dalles, Ore.—Howell Lumber Co. destroyed.

Yamhill, Ore.—Shindler Bros. sawmill destroyed.

Eddystone, Pa.—Locomotive paint bldg. at Baldwin-Lima-Hamilton Corp. plt. destroyed.

Erie, Pa.—Enameling plt. of Ervite Corp. damaged.

Kennett Square, Pa.—Kennett Hotel destroyed.

Lancaster, Pa.—Barn on Howard Magee Farm, R. D. 6, destroyed.

Lititz, Pa.—Two storage bldgs. owned by John McGee, damaged. Sparks from tractor.

Phoenixville, Pa.—Trio Restaurant destroyed. Short circuit.

Swedeland, Pa.—Garage owned by Charles and Frank Grohoski, destroyed.

Camden, Tenn.—Main bldg. of Holliday High School destroyed. Lightning.

Clarksville, Tenn.—Trestle on Tennessee Central

Railroad between Clarksville and Hopkinsville, Ky., destroyed.
Columbia, S. C.—One-fourth of stock of bonded liquor of Palmetto Distributing Co. destroyed.
Columbia, Tenn.—Jones Bldg. housing McClellan's store on first floor and offices of Dr. J. W. Wilkes, Local 3803 Communication Workers of America, Guarantee Endorsement Co., Retail Credit Co., Home Beneficial Life Insurance Co. and Church & Gaskill auctioneers, damaged. Overheated refrigerator motor.
Memphis, Tenn.—Swayne Lanham Tires, Inc., damaged. Defective wiring.
Nashville, Tenn.—Young Sales & Roofing Co. destroyed.
Brady, Tex.—Smith Electric Shop, Carlson Cleaners and Sunset Motor Lines destroyed. Diesel oil drum explosions.
Dallas, Tex.—Vent-A-Hood Co. plt. damaged.
Waco, Tex.—Carpenter and paint shop at Baylor University, destroyed.
Wichita Falls, Tex.—White's Auto Store damaged.
Galax, Va.—Galax Laundry & Dry Cleaning Co. plt. destroyed.
Pennington Gap, Va.—Harper-Allen Tobacco Whse. destroyed. Lightning.
Aberdeen, Wash.—Lenscott dry kiln of Bay City Mill destroyed.
Chehalis, Wash.—Perma Products Co. destroyed. Explosion.
Longview, Wash.—The Pacific Mineral Products Corp. whse. destroyed.
Oroville, Wash.—Albert Lehrman apple whse. destroyed.
Toledo, Wash.—Olson Bros. sawmill destroyed. Planer sparks.
Borderland, W. Va.—Borderland Collieries Co. coal firm, destroyed.
Charleston, W. Va.—Lincoln Hotel, Monarch Billiard Parlor and Fife Street Shoe Shop destroyed.
Huntington, W. Va.—Roxy Theatre bldg. including 12 apts. and a dry goods shop damaged.
Fremont, Wis.—Eldor Creek Cheese factory, destroyed.
New Westminster, B. C.—Capilano Timber Co.'s shingle mill destroyed.
Vancouver, B. C.—Albion Lumber and Millwork Co. whse. containing about 50,000 board feet of finished lumber and huge stocks of plyboard, wallboard and paint, destroyed.
Arnprior, Ont.—Bldg. housing stockrooms of Stedmans Novelty store and adj. premises, damaged.
Guelph, Ont.—Several downtown stores and twenty apts. destroyed.
Guelph, Ont.—A. P. Green, Ltd., plt., mfrs. of fire bricks and specialized lines such as insulators, crucibles for gold assaying and moulds for the mfr. of diamond drills, destroyed.
Hamilton, Ont.—S. S. Hamiltonian, a triple-decked Great Lakes passenger ship, used for picnics, excursions, moonlight cruises and sightseeing trips, destroyed.
Honey Harbor, Ont.—Central Lodge at Delawanna Inn destroyed. Defective wiring.
Kenora, Ont.—Chalet Tourist Hotel on nearby Golf Course Bay destroyed.
Nestleton, Ont.—Storage barn on Lavargne Sugitt farm, three miles northeast, destroyed.
Ottawa, Ont.—Parliamentary Library destroyed.
Scarboro, Ont.—Piggery operated by W. J. Skelhorn, destroyed.
Woodbridge, Ont.—Barn, driving shed, pig pen and chicken house on farm of D. G. Boyce, destroyed.

Pump Operators' School

The Charlotte, N. C., Fire Department will conduct a fire pump operators' school for the firemen of North and South Carolina and Virginia at the Firemen's Hall in Charlotte, September 22-23.

Fire Chief Donald Charles says that invitations have been mailed to Fire Departments in the three States. Chief Charles says that he expects about one hundred and fifty men to attend the school. The program will include a round of lectures, discussions and practical demonstrations. D. G. SPENCER.

Vamp Dies in Fall from Truck

Theodore D. Schirmuhly, 53, a Selden, L. I., volunteer fireman, died in Mather Hospital, Port Jefferson, L. I., on August 8 last, from a fractured skull suffered the night before when he fell off the rear step of a fire truck on Jane Blvd. The apparatus was on its way to a fireman's parade in Port Jefferson Station. Fireman Schirmuhly lived in Middle Island and leaves a wife and daughter.

"Another Life Saved! Our Record's Tops with Scott EQUIPMENT"

* Scott Air-Pak uses pure air (not oxygen) for fighting fires or rescuing victims.

* Scott Inhalators use oxygen or oxygen mixtures for reviving victims.

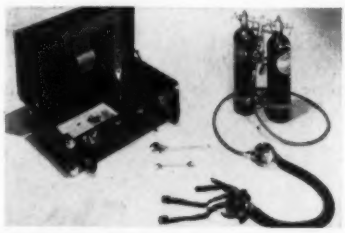
Scott DEMAND INHALATORS

"Emergency call from the watch desk — Rescue squad needed — man overcome. Minutes later he was feeling better, revived with our Scott Demand Inhalator. Makes you feel good to help folks like this.

"These efficient, portable oxygen units are wonderful for emergency service. Victims get 100% concentration — comfortably — thanks to the demand feature. We can also provide constant flow by pressing a button. The demand feature is fully automatic and cuts down training time."

SCOTT Air-Paks (illustrated on fireman at top left) enable rescue crews to reach victims under the most hazardous breathing conditions. Air-Paks assure the wearer constant supplies of cool, fresh AIR (not oxygen) for quick rescues with maximum safety. Do as hundreds of other fire departments have done . . . specify SCOTT.

TYPE A—for fixed installation in truck or ambulance.



TYPE B—portable, including carrying case (with or without cylinders).

Ask your distributor for FREE DEMONSTRATION or write us today!

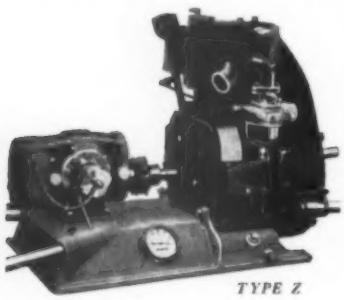
ESTABLISHED IN 1937 Scott FOR SAFETY—FOR SERVICE

MEDICAL DIVISION
SCOTT AVIATION CORP.
215 ERIE ST., LANCASTER, N. Y.
CANADA: SAFETY SUPPLY CO., TORONTO — BRANCHES IN ALL PRINCIPAL CITIES
EXPORT: SOUTHERN OXYGEN CO., 157 Chambers Street, New York 7, N. Y.

Help Build a Greater Fire Prevention Week—Support the Red Letter Campaign

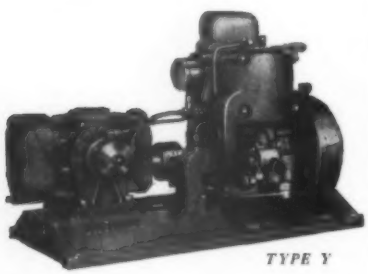
"Almost 30 Years Old and Still Going Strong!"

That's what owners report today about some of earliest models of Pacific Pumpers ever built.



TYPE Z

WHEN THE FIRST Pacific Pumper was introduced, it was a startling innovation. To produce an efficient pump light enough to carry by hand into rugged terrain but powerful enough to deliver an effective flow of water to combat forest blazes was news of national importance. Today, after nearly 30 years, many of the earliest Pacific Pumpers are still in use and are still the favorite of experienced fire fighters . . . mute testimony to the stamina and dependability built into all Pacific Pumpers . . . and to Pacific Pumper's policy of supplying parts for even the earliest models.



TYPE Y

Years of engineering research and thousands of practical field tests made possible the improvements incorporated in the famous Type Y Pacific Pumper . . . the most powerful unit ever built for its weight and size. The Type Y Pacific Pumper quickly won the approval of experienced fire fighters and fire fighting authorities . . . and is still the standby of many of the nation's most practical forest fire fighters. Newer, post-war models of Pacific Pumper are now available . . . all even lighter, more compact and durable, and more versatile for a variety of purposes.

Write for data on the complete line of Pacific Pumpers, hose and accessories

PACIFIC *Marine Supply Co.*
FIRE EQUIPMENT DIVISION
SEATTLE 1, WASHINGTON

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Only the Insects Didn't Weep!

Herman Keehbler, a fire inspector at the plant of Merck & Co., manufacturing chemists in Rahway, N. J., joined his family in a good cry one day last June, when they tried to move into their recently purchased home in nearby Union, N. J.

Mr. Keehbler, between weeps, told firemen he had summoned, that he put a quart and a half of liquid tear gas preparation in saucers in the house the night before to rid the place of centipedes. When he and his family tried to enter the next morning, they were driven off by the fumes.

Firemen, donning gas masks, groped their way into the gas-filled house, gathered up all the saucers with their chemical irritants, and opened up all the windows. The family then settled down to wait for the fumes to vacate the premises.

* * *

Troublous Times in "Anonymous"

The place really exists—and this is the story about its fire department which had a bad year, but to save the chief needless pain we'll just call the town "Anonymous."

Less than a year ago, said the chief, the firemen got involved in sponsorship of a smoker that was raided by police, who arrested a group of entertainers, including three dancing girls.

A few weeks before reporting, the chief said the boro council became riled at a report that someone had stolen gasoline from the fire truck. But an investigation, said the chief, disclosed there was no theft—there had been no gas in the tank to steal, the council was assured.

Latest ill luck, if you care to call it that—came when a roof ladder apparently disappeared without notice from a fire truck. An advertisement inserted in a local newspaper asked "Whoever borrowed the . . . ladder . . . please return it." The chief said that was just somebody's idea of a joke on the vamps. What actually happened, he said, was that a fire department officer, unknown to the chief, gave a local resident permission to use the ladder. The piece of equipment, missing from the truck for two days, he said, was returned in due time. "Everything's O.K.—just a misunderstanding," concluded the chief.

Thanks, JAMES DRUM.

* * *

Anything Can Happen to Fire Fighters

Two choice items from the front page of the same paper, same date, May 15, 1950, rate inclusion in "The Watch Desk."

HARTFORD, Conn.—Hartford Firemen Black Out Blaze. Firemen from Engine Company 3 used Yankee ingenuity instead of their axes to get at a fire Sunday.

Called to Smith's Cutlery Store at 870 Main Street, the firemen found a box smouldering in the window of the store. The sun's rays had passed through a magnifying lens on display in the window and had started a cardboard container smoking.

Faced with a locked door and a potential blaze, the firemen pulled a tarpaulin from their truck and hung it over the window, blocking out the rays of the sun until the owner came and opened the door.

WEST HARTFORD, Conn.—Santa Act Brings Firemen to Rescue.—Ellison Smith of 4 Sunnydale Road fell down a chimney Sunday and was extricated by firemen who tore away some of the field stone masonry in the fireplace to free him.

The accident occurred shortly after 5 P.M. Smith was not injured, but he lost his pants on the way down. According to firemen, he was making repairs at the top of the chimney and lost his footing. He slid feet first some two stories earthward and landed "wedged" in the flue chimney with his feet dangling into the fireplace.

The fireplace opens on a terrace outside the house. Firemen worked a half hour to free the man.

Thanks, WILLIAM J. MCMAHON

* * *

Hot Off the Tape

The fire was held to a wastebasket, but a captain, two lieutenants and three firemen of the Utica, N. Y., Fire Department were hospitalized overnight. The blaze broke out the night of June 30 in a container in the basement of a downtown store. The firemen were overcome, according to press reports, by "carbon tetrachloride fumes from seven extinguishers set off by the heat" . . . . A freak fire on June 20th last near East Williston, N. Y., brought death to three trotting horses and destroyed the van in which they were riding. The fire started, police said, when the van ran over a flare marking road construction and flames were sprayed onto the horses' bedding. Loss unofficially estimated at $15,000. . . . Actress Beverly Wills, daughter of comedienne Joan Davis, eloped to Carson City, Nev., June 22 and married a fireman. He is Lee Bamber, 25, member of the Pasadena Fire Department. . . . . Robert Grzeskowiak, said to have been a marine, fell to his death from the window sill of his 11th floor room in a downtown Springfield, Mass., hotel early June 26th. A second man in the room who escaped, suffered serious burns. The fire was confined to one room. Grzeskowiak reportedly attempted to escape and hung by his hands from the window sill of the burning room for several minutes before his grip gave way. Wilbur Heekin, the other victim, could not say how the fire started. . . . Three Baltimore firemen were putting up a new alarm box. Up walked a small boy, saying: "Look at my new cap pistol. The firemen smiled. "Bang!" Off went the pistol and the bullet whistled over the men's heads. They promptly grabbed the pistol and found it was a loaded German Luger. Before they could recover from their shakes, the boy, about 5, walked away, unidentified. (Thanks, W. A. McDONNELL). . . . Tough firemen this! A black widow spider which bit Fireman W. H. McCallen of Riverside, Calif., got what was coming to her. The pizenous spider bit McCallen four times while he was sleeping, but he suffered

FASTER ACTION!...

No groping! No fumbling! Just pull the trigger! Flame-smothering dry chemical goes to work fast! You can count on a *Kidde* Dry Chemical Portable to beat fire to the punch.

Walter Kidde & Company, Inc.
933 Main St., Belleville 9, N. J.
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The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc. and its associated companies.

Kidde

"More protection -at lower cost to taxpayers with RCA 2-WAY RADIO"

says **Chief Radio Engineer Marshall L. Dull**
City of Wilmington, Del.

Headquarters control—dispatches protection to citizens over more than 100 square miles.

Fire fighters get on the scene sooner.

S.P.C.A. gives better service.

The police get to the spot in less time.

Parkway Police keep parkways safer.

"RCA 2-way radio gets men with 'know-how' to trouble spots—FAST. Their skilled direction in those early precious minutes speeds law enforcement, lowers fire losses—definitely saves money for our citizens."

Wilmington's unique 2-way radio system links all law-enforcement and fire-fighting facilities into one protective network. Two headquarters stations . . . one for regular service . . . one for emergency . . . control 51 two-way radio mobile units (and all fire houses).

Just one instance among hundreds where RCA 2-way radio communication is protecting taxpayers and saving them money. Learn about its value in *your* own operations. Write Dept. P-6, RCA Engineering Products, Camden, N. J. (*In Canada, write: RCA Victor Company Limited, Montreal.*)

Just off the press—new brochure giving vital facts about RCA 2-way Radio for safety. Mail coupon below.

RCA ENGINEERING PRODUCTS
Dept. 50-I
Camden, N. J.

Send me the new brochure on RCA 2-way Radio Systems.

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RCA **RADIO CORPORATION of AMERICA**

no ill effect. The spider, however, was found dead nearby, apparently from over-indulgence. (Thanks, JACK KEARNS) . . . . In Seattle, Wash., a longshoreman dashed into a blazing warehouse to rescue a clerk who was trapped in an upstairs office. After he had carried the man to safety, he was congratulated by firemen and a public spirited citizen handed the hero $50. Astounded, the longshoreman stepped back and fell off the dock, had to be pulled out by three friends. . . . In Hollywood, Actress Lucille Norman's skirt caught fire when she stood near a campfire during a romantic scene with Randolph Scott in Warner Bros.' outdoor color drama "Carson City." A sudden gust of wind blew flames against Miss Norman's 1870 costume and ignited it. Aided by Scott, the actress managed to rip off the skirt before suffering severe burns. However, she wasn't the least bit embarrassed by losing her skirt—she still had on five petticoats. (Thanks, R. H. DAVIDSON.) . . . . In Peabody, Mass., Leonard Halt, who goes around demonstrating fire apparatus, had to sound a fire alarm when he discovered a burning barn. Unfortunately, he'd left his demonstrator-pumper at home! (Thanks, PERRY O. POPP). . . . The F. D. phone rang one night in the vamp's headquarters at nearby West Mead Township, Pa., "Get out in the road quick," said an excited feminine voice. "There's a fire coming your way." The volunteers followed instructions, and sure enough, in a few minutes a blazing truck came roaring down the roadway. The firemen stopped the truck, owned by Burdette Oxygen Co. of Cleveland, O., and extinguished the fire in the truck brakes. Driver had been unaware of the blaze.

Thanks, IRV' JOHNSON

* * *

Oil Is Not Fire That Smokes

There may be fire where there is smoke, but sometimes the ratio is all out of kilter. Witness the "lake of fire" on the south side of Charlotte, N. C., the afternoon of June 30 last, which had local fire fighters a bit "steamed up" over possibilities of a conflagration—and a nice June fire record shot to pieces.

The first alarm sounded at fire headquarters at 1:55 P.M., followed immediately by a flood of other calls and inquiries as a fearsome populace spotted the darkening skies.

As Fire Chief Donald Charles pulled out of headquarters the smoke cloud was already mounting and he woefully shook his head. Fire losses in Charlotte had been heavy for the past two months, but the June record, usually light, looked like it was going to blow up in his face.

All hands breathed a collective sigh of relief, however, when they found the fire was more smoke than blaze. It was merely the result of accidental ignition of surplus oil that had drained into the lake behind the smelting plant. It took the brothers but a breath to knock out the blaze, with only slight damage to a small pumping house at the lake's edge. The giant tower of smoke, that had darkened the sky disappeared like magic—so quickly in fact that the lads came in for a lot of congratulations at their "marvelous stop of a conflagration."

Reviewing the kind things said about their prowess, Chief Charles remarked "we're proud of our record", but this time I'm afraid we can't take too much credit. There was just more smoke than fire to this incident.

Thanks, D. G. SPENCE.

You bet I specify MIDWESTERN Protective Clothing ...my men deserve the BEST!

PROTECTION • COMFORT • SERVICE

Superior quality, design, fabric texture and many exclusive features have made Midwestern Protective Clothing the leader wherever men fight fires. Mackinaw Coats and other famous Midwestern garments help safeguard the fireman's life on every run . . . enable him to efficiently use his equipment to the fullest advantage.

There is no substitute for the extra protection, built-in comfort and longer wear you get by specifying Midwestern clothing. In our vast selection of rubber materials you will find the type of fabric exactly suited to your climate and needs. You can count on the softness and flexibility of the high grade materials used to meet your most exacting requirements for lasting comfort and rugged service.

Due to government requirements for Midwestern Protective Clothing, prompt delivery will be assisted if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you literature and material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

FALSE ALARMS

Civilized

A party of explorers making their way through darkest Africa came upon a group of cannibals about to feast on their late enemy. The cannibal chief came forward to geet the exporers in perfect English. When they showed surprise at his command of the language, he explained that he had been educated at Yale.

"What!" exclaimed the explorers.

"You've been to Yale, and yet you return to feed on human flesh. It's almost unbelievable.

"Well," replied the chief modestly, "Now I use a knife and fork."

Early to bed,
Early to rise,
'Til you make enough cash
To do otherwise.

Every morning the wives of two next door neighbors would meet in the rear yard for a little session of back-fence gossip. "My goodness," said one, "I'm so excited! Harry is going in for anthropology. I always knew he would indulge in something worthwhile."

"How did you find it out?" inquired the other.

"Oh," said the first wife, "I found some tickets in his coat with the inscription 'Mudhorse 15 to 1', and when I asked Harry about them he explained they were relics of a lost race."

One thing you've got to admit about the little red schoolhouse—it had something in back of it.

Visitor: "Can you tell me the name of this school?"

Young Man: "Sorry, mister, I'm just a football player here."

Murphy: "What's that in your pocket?"

Pat (in a whisper): "Dynamite. I'm waiting for Casey. Everytime he meets me he slaps me on the chest and breaks my pipe. Next time he does it, he'll blow his hand off."

Weary Willie can't figure out why they call the stuff in whiskey "neutral spirits." Willie says that after his second drink he shifts from neutral into high, and after his fifth one, goes into reverse, and spends the next day in low.

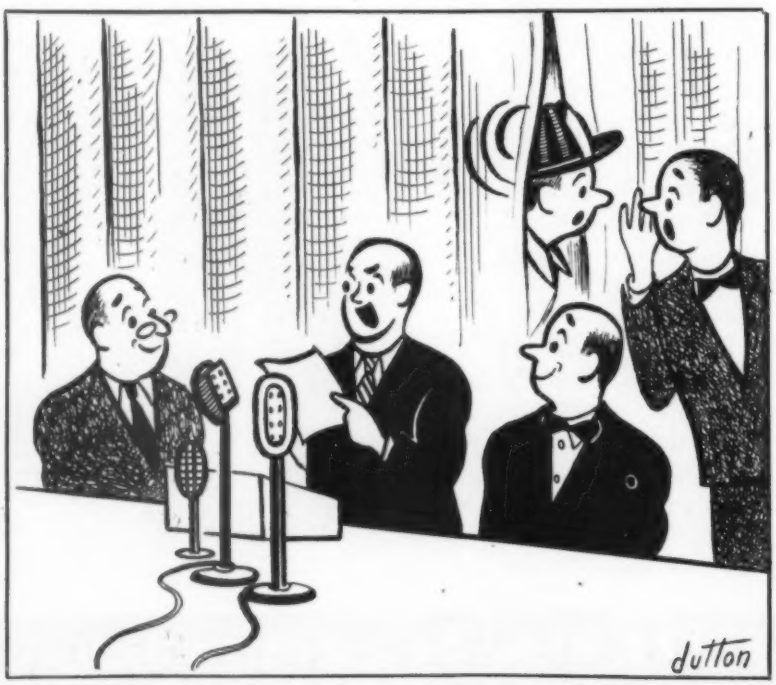
Two safecrackers were paying a nocturnal visit to the office of a large establishment, which had been doing a brisk business. One of the frequently imprisoned characters took off his shoes and socks and began to twist the dial on the safe with his toes. His pal grew impatient:

"Come on, Mike, let's blast dis thing open and lam outta here!"

"Ah, don't be chicken," drawled the other, "it will only take a minute longer dis way, and boy will it drive them fingerprint experts nuts."

Variation

Wolf to friend: Who was that lady I saw you outwit last night?



"But I couldn't interrupt him now. We're on a nationwide hookup!"

What a Sight

"Was your girl pleased with the bathing suit you gave her?"

"Yeah. You should have seen her beam when she put it on!"

The hotel seemed very stuffy to the sales representative just returned from a field trip where there was always plenty of fresh air. In vain he tried to sleep. Before getting into bed he had endeavored to open the windows but found them all sealed.

He tossed and turned until, at last, in desperation he got out of bed, wrapped a towel around his hand and smashed a window. Then he breathed deeply, got back into bed and fell into a deep and refreshing sleep.

Next morning he had to pay $6.00 for smashing the mirror above the bureau.

If you add only two words a week to your vocabulary, in a single year your friends will wonder who the hell you think you are.

Polly: "I think long hair makes a man look intelligent."

Milly: "I saw a wife once pick a long hair off her husband's coat and he looked foolish."

A plunging neckline is something you can approve of and look down on at the same time.

Wife (sarcastically): "I suppose you've been holding a sick friend's hand all evening."

Husband (absently): "If I'd been holding his hand I'd have made some money."

Dr. Jones had an urgent call from a certain city engineer who reported that his small son had sucked all the ink out of a fountain pen and swallowed it.

"All right, I'll come over at once," replied the doctor. "What have you been doing in the meantime?"

And the engineer answered, "Using a pencil."

A girl from the East took a position with a retail feed store up in Wisconsin. She was warned that farmers were great joshers, so she made up her mind not to be taken in by them. The first morning a farmer came in and asked for some shorts (ground corn) for his pigs, and the girl replied: "I'm sorry, but we are out of pig shorts. How about some nice brassieres for your cows?"

Custom Scratched

Some years ago a hotel in Louisville adopted the custom of naming a room in the hotel for each winner of the Kentucky Derby. There is a Zev Room, a Gallant Fox Room, a Whirlaway Room and so forth. But after the 1946 Derby the management decided to abandon the practice. The winner that year was Assault.

COAST TO COAST

SEARS, ROEBUCK PROPERTIES

PROTECTED

Automatically

BY ADT

Sears' well-established reputation for high quality at low cost has been gained through astute purchasing and efficient operation. The same sound policy was applied in choosing electric protection service for the tremendous stocks of merchandise in Sears' properties throughout the country.

Like thousands of progressive business concerns, Sears found that appropriate combinations of ADT Automatic Protection Services give a higher degree of protection at lower cost.

Mail order houses, warehouses and larger stores from coast to coast are protected *automatically* by ADT to safeguard against fire, burglary and other hazards.

Automatic protection services for these establishments include: Sprinkler Supervisory and Waterflow Alarm; Aero Automatic Fire Alarm; Burglar Alarm; Automatic Heating and Industrial Process Supervision.

An ADT representative will show you how these services can help you solve *your* protection problems. Phone the ADT Central Station in your city or write to our New York Executive Offices.

ADT

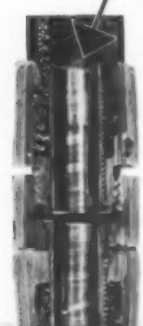
Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY 155 SIXTH AVE., NEW YORK 13, N. Y.

AIR PORT FIRE FIGHTERS SPECIFY BAR-WAY COUPLINGS

For booster and high pressure fog lines

There are four good reasons why the fire fighters specify BAR-WAY couplings. Four reasons why BAR-WAY couplings are growing in favour with firemen, hydraulic engineers and others who insist on the best.



Unretouched Photo

→ **SAFETY**—The coupling becomes the *strongest part of the hose line.* Tested to 3000 pounds pressure and 500 pounds pull.

→ **FULL FLOW**—No suppression of flow in coupling. No shrinkage of hose at coupling.

→ **FLEXIBILITY**—Reels smoother. Easily replaced. Nothing to catch on corners or underbrush.

→ **BETTER MADE**—Accurately machined, always the same, interchangeable. WILL NOT FAIL.

Send for our free pamphlet. Gives detailed specifications for all types of pressure hose.

BAR-WAY MFG. CO.

STAMFORD, CONN.

WEST COAST REPRESENTATIVE } W. D. RIGDON, 383 Brannan Street, San Francisco 7, Calif.

RAY-LINE

360 DEGREE FRESNEL FLASHING WARNING LIGHTS

are most effective for all types of emergency work, both day and night. Style No. 41 mounts on vehicles. Style No. 40 is a portable unit and can be placed wherever required.

Red is standard. Blue, Green or Amber can be furnished.

Write Dept. No. 27 for catalog.

No. 41

THE PORTABLE LIGHT CO., Inc.

216 William Street New York 38, N. Y.

No. 40

Obituaries

Chief O. J. Hindle

Oswald J. Hindle, 43, Chief of the Nichols, Conn., Fire Department, died suddenly on August 21 of a heart ailment in his home, 1373 Huntington Turnpike. Chief Hindle apparently had been in good health and had just returned from a vacation. In addition to his duties as Fire Chief, he served as Fire Warden for the Southeast District of Trumbull, and was tax collector for the town of Trumbull.

Chief Hindle was born in Brooklyn, N. Y., and had been a resident of the Trumbull district for the past 15 years. He is survived by his wife, Viola Hindle; two sons, Frederick Gary, and John Richard Hindle, and daughter, Carol Hindle, of Milford; two brothers, Frederick O. Hindle, of Milford, and Charles T. Hindle, of Philadelphia.

TOM MAGNER.

Former Chief Parsons Buried With Honors

Former fire chief Horace W. Parsons, a member of the Bryn Mawr, Pa., Fire Company for 41 years and its chief for 29 years, had his last wish fulfilled. That was that his last ride be on a fire department pumper.

Funeral services for the deceased 62-year-old chief were held August 8, last, in Ardmore, Pa., the coffin being carried to the cemetery in the green colored pumper of the fire company. Another truck carried flowers.

Ex-Chief G. T. Rowley

G. Truman Rowley, former Chief of the Fairfield, Iowa, Fire Department, died July 29 at the Jefferson County Hospital in that city where he had been ill for two weeks.

Chief Rowley had been a member of the local fire department for over a quarter of a century, and its Chief for thirteen years.

He was born October 27, 1883, at Richland, Iowa.

Captain A. W. Hill

Captain Arthur W. Hill of the Oshkosh, Wis., Fire Department died on Sunday, June 15th, at Mercy Hospital as the result of a heart attack which he suffered while on duty.

Captain Hill was born November 1, 1900. He became a member of the Oshkosh Fire Department on March 15, 1934, and was promoted to the position of lieutenant on September 16, 1948, and became a captain on April 16, 1950.

Deputy Chief Dies in Fire Station

The Auburn, Me., Fire Department lost a veteran fire fighter suddenly on Sunday morning, June 29, 1952, at 7:08 A.M. Deputy Chief F. W. Whirley reported as usual for work, and was starting to hang up his helmet and coat to go on vacation. As he passed the dispatchers office, he fell to the floor dead. The Deputy Chief had been well ap-

parently, and died from an acute heart attack.

Chief Whirley entered the service as a call man on December 16, 1928, went on the permanent force in June 1929, was promoted to Captain in December, 1936. He passed the civil service examination for Deputy Chief in August 1945, finished his probation term six months later and was qualified March 3, 1946. He had just recently been appointed Drill Instructor by Chief Miller and had a very fine Drill School in operation when the tragedy occurred.

A. G. Johnson

Alger G. Johnson, age 60, of 113 Forest Drive, Catonsville, Md., died suddenly on July 4, while attending the Maryland Volunteer Firemen's Association Convention in Ocean City, Md.

Mr. Johnson who was well known in Eastern Pennsylvania, Delaware and Maryland as a sales representative for Herbst-Randel Associates of Pittsburgh and Maxim Motor Company of Middleboro, Mass.

Persons in the News

Coyle Heads Gaffney, S. C., Fire Department

Dever Coyle, a fireman and former alderman of the city of Gaffney, S. C., has been elected chief of the Gaffney Fire Department to succeed Jack Cook, who resigned in July, after serving more than 20 years as head of the department.

D. G. SPENCER

Phone Company Freed from Fire Loss Liability

A Superior Court judge at New Haven, Conn., on June 19, reversed a jury verdict in a suit in which the plaintiff claimed fire did $15,000 damage to his home at Newtown when a telephone operator failed to connect him with the nearest fire company.

The jury had given $6,700 to Thomas Robinson, Jr., in his suit against the Southern New England Telephone Company. Robinson had claimed that when his house caught fire on April 18, 1948, a telephone operator refused to connect him with the Riverside Fire Department in adjacent Oxford, but connected him with the Sandy Hook (Newtown) department, six miles more distant from his blazing home.

He charged in his suit that had the Riverside department been summoned, as he asked, $6,700 of the damage to his home would have been averted.

Judge Samuel Mellitz set aside the verdict, asserting that evidence had not been presented to show that the Riverside department was available at the time of the fire, or that it "could or would have responded promptly." The factors, he asserted, "were left to pure speculation."

"The conclusion is inescapable," Judge Mellitz ruled, "that several essential elements in the chain of causation have not been established and that there is no basis for a finding of a casual connection between the plaintiff's damages and the defendent's default without resort to speculation and conjecture."

TOM MAGNER.

THIS IS ALL YOU NEED TO MAKE 5,000 GALLONS OF AIR FOAM and it costs less than 5 lengths of hose!

Now—without sacrificing hose space—you can carry adequate air foam equipment. *All you need* is one Pyrene* No. 3 Forcing Type Foam Maker and four 5 gallon cans of compound. Only Pyrene makes it possible to produce air foam in volume with such minimum equipment. And with Pyrene it's easy to get into action fast. All you have to do is couple the foam maker into the hose and insert the pick-up tube into the can of foam compound—it starts making foam immediately.

Plan right now to equip *at least one* of your units with Pyrene. Due to increased oil and gas deliveries, more and more flammable liquid fires are occurring every day. Write for name of the Pyrene jobber nearest you.

*T.M. Reg. U.S. Pat. Off.

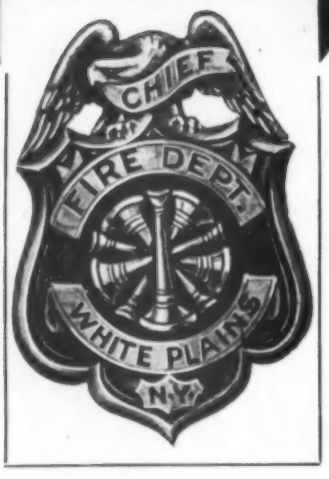
Pyrene AIR FOAM

PYRENE MANUFACTURING COMPANY

594 Belmont Avenue **Newark 8, New Jersey**

Affiliated with C-O-Two Fire Equipment Co.

BRAXMAR
GREATEST NAME IN BADGES

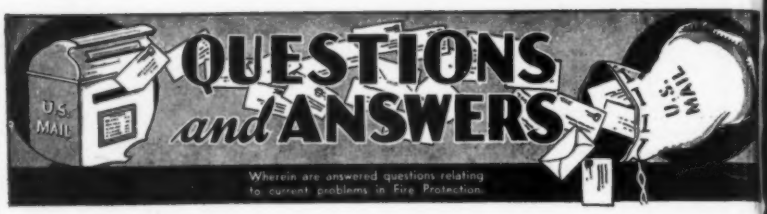


Since 1879

Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

Write for latest circular.

C. G. BRAXMAR CO., Inc.
JOHN O. VEIT, *President* — JOHN O. VEIT, JR., *Secretary-Treasurer*
216 E. 45th Street, New York 17, N. Y.



Engines in Tandem

To the Editor:

In Lesson 1 of your "Promotional Study Course for Firemen," in Question 12, you state: "If you were in charge at a fire and you were using two centrifugal pumping engines, neither of which could deliver a pressure of 200 pounds and you decided it would be advisable to increase the pressure, how would you proceed and about what pressure could you secure?" Your answer refers to placing the pumpers in tandem, and connecting them to the hydrant. No one here in our company has ever heard of placing engines in tandem. We would appreciate your explaining this term.

R. H.

Answer: When two pumpers are placed in tandem, they are placed close together, and the discharge from one is directed through hose connections into the intake of the other. The second engine then delivers water to the hose lines which feed the nozzle.

Placing two centrifugal pumps in tandem is very much the same as changing a parallel series type centrifugal pump from capacity to pressure. In this latter case, the stages are run in series, and the second stage takes the water from the first stage under pressure and boosts the pressure.

It is the same with pumps (centrifugal) placed in tandem. If the first pump is delivering water to the second pump at, say 150 pounds per square inch, the second pump will boost the pressure from this point upward. The discharge pressure will not be quite as much as the total of the pressures delivered by the two engines.

If the length of hose between the two pumpers is long, then the pumpers are said to be operating in relay. Usually the distance between two pumpers pumping in tandem is the length of a section of hose. One or two lines may be used for carrying the water under pressure from the first pumper to the second.

Lightning Protection

To the Editor:

A garage in the area has recently started installing a large metal pole for protection against lighting.

This pole is considerably higher than the surrounding buildings and while resembling a flagpole, care is being taken to have it well grounded. Could you say what degree of protection this method offers, if any, and how it would compare to lightning rods, particularly on farm buildings where barns seem to be a prime target?

We have had five barns hit and burned in nine years in this small town of about 1,000 people.

J. E. F.

Answer: With regard to the protection afforded against lightning by a single mast, we quote below from the Eighth Edition of "The Crosby-Fiske-Forster Handbook of Fire Protection":

"Cone of Protection. There has been much discussion of a cone of protection surrounding an air terminal or other grounded conductor which is higher than its surroundings. Both theory and laboratory experiments indicate that there is a conical space surrounding the vertical axis through such an air terminal, within which a lightning bolt is not likely to strike, because any discharge will choose the air terminal instead. This assumes a certain symmetry of conditions which is not always fulfilled in nature. The cone of protection has a radius of base which depends upon the height of the cloud above the earth and also upon the height of the air terminal. The higher the cloud, the larger the radius of the base of the protected cone.

"For practical conditions the ratio of radius of base to height varies approximately from two to four. Practical experience indicates that protection within this conical space is not complete, as occasionally a bolt of lightning strikes within this cone of nominal protection, and the action simulates that of a dart which possesses inertia, and consequently does not follow the path of maximum potential gradient."

Thus the cone of protection represents a cone whose diameter is equal to the height of the mast, or whose radius is one-half the height of the mast.

Evidently, a single mast of this type would not afford as effective protection against lightning as proper installation of lightning rods.

Hydraulics of Foam Layouts

To the Editor:

I would appreciate your giving me the answers to the following questions.

1. We have a 1½-inch Phomaire Model 15 play pipe foam applicator on which we have no way of finding or figuring out the nozzle pressure, engine pressure or discharge. It states on the model plate that the minimum water pressure is 75 pounds.

2. Does this mean nozzle pressure?

3. Can you tell us what size

mooth bore nozzle this applicator would compare to in friction loss? What size area would it cover in proportion to a said amount of foam being used at 6 per cent to 100 gallons of water?

4. Can you use the formula E. P. = N. P. x (1.1 + KL) if the nozzle pressure is known for this or any other foam applicator?

W. B. S.

Answer: Credit is given to A. F. Ratzer, Manager, Foam Engineering Department, Pyrene Manufacturing Company, who has supplied the answers to the questions you ask. These answers are as follows:

1. The minimum water pressure of 75 pounds stated on the model 15 playpipe refers to the pressure at the nozzle. When the unit is in operation, the model PP-15 playpipe has a water capacity of 150 G.P.M. at 100 P.S.I., and when it was first put on the market, 75 P. S. I. was considered the minimum safe operating pressure. The unit has since been approved for operation down to 30 pounds pressure; although the water capacity and foam generation characteristics are proportionately less at this lower pressure.

2. The water capacity of the model 15 is equivalent to that of a smooth bore nozzle having a diameter slightly greater than ¼".

3. & 4. Pyrene Foam Playpipes are designed with special shaped nozzles having internal baffles and other special features in order to create a predetermined degree of turbulence. In general it is not possible to calculate the water capacity accurately from a knowledge of the nozzle diameter, as this does not give a true indication of the free passageway for the solution. If the water capacity at one given pressure is known, however, then its capacity at any other pressure can be calculated by use of the square root formula.

July Fire Losses

Estimated fire losses in the United States during July amounted to $61,675,000, it was reported by the National Board of Fire Underwriters.

According to Lewis A. Vincent, NBFU's general manager, this $61,675,000 loss represents an increase of 18.1 per cent over losses of $52,220,000 reported for July 1951, and an increase of 5.3 per cent over losses of $58,585,000 for last June (1952).

Losses for the first seven months of 1952 now total $466,328,000, an increase of 6.1 per cent over the first seven months of 1951, when they amounted to $439,661,000.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Montreal Fire Festival a Hit

The Eighth Annual Festival of the Montreal, Que., Fire Department, held at St. Helen's Island July 27, attracted more than 60,000 Montrealers to see members of the department play host to the public.

Field events were open to the public, and children were given special treats in the form of pony rides and other novelties.

Nip Brush Fires in the Bud with an FZZ

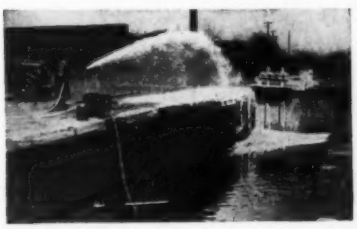
Be Prepared NOW to Fight Forest Fires with a HALE FZZ Portable Pumping Unit

Above and at bottom are two on-the-spot pictures showing a HALE Type FZZ Portable Fire Pumping Unit fighting a brush fire from a moving truck. An FZZ can be mounted or carried on any type of equipment, making it a real "work-horse" for fighting brush, field and forest fires while in motion. Booster tank is used for source of water.

The Hale Type FZZ is a powerful, sturdy, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping.

Above—FZZ Pumping solid stream and fog.

Above—FZZ Relaying through Major Pumper.



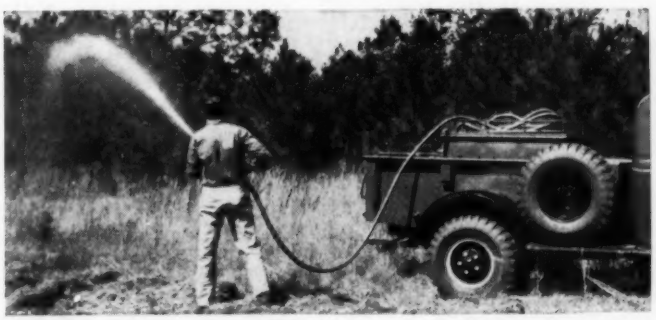
Above—FZZ Pumping Foam (Foam proportioner built in if specified.)

The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ½".

Note: Discharge adapter can be supplied for use with 2½" hose.

Available in carrying frame; mounted on two wheels; or mounted on rubber-cushioned steel channels.

Nip Brush Fires in the Bud with an FZZ



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"ASK ANY FIREMAN"

World Wide Fire News

By Roi B. Woolley

Navy Carrier Fire Reminiscent of Jap Attack

Nine men were killed and 75 injured aboard the U.S. Carrier Boxer near Korea on August 5, last, when a jet plane exploded below decks and touched off a fire that destroyed it and twelve other planes.

Sixty-three of the ship's crew leaped overboard to escape the searing flames which raged through the hangar deck where planes were stored. Navy officals said "serious damage" was done to the 27,000-ton carrier which was forced to withdraw from the war zone to Yokoshuka naval base in Japan.

No enemy action was involved, it is said, but the blast and fire were similar to like conditions that prevailed during Jap Kamakaze attacks in World War II.

Well-organized damage control operations, during which foam and water fog and other extinguishing agents were freely used, finally overcame the threatening blaze. About fifty of the injured crewmen suffered from smoke poisoning. Twenty-five were admitted to the ship's sick bay. The remainder returned to duty after first-aid treatment. One case was listed as critical and one serious.

All those who were forced overboard were rescued by lifeboats and helicopters.

* * *

Fire Averted in "Little Inch" Pipe Line Blast

Natural gas, ripe for explosion, was sprayed over a square mile of farmland about five miles from the U. S. Army's big Marietta Depot recently, between Lancaster and Harrisburg, Pa., adjoining an Eastern Pennsylvania area containing some of the world's richest farmland, when a newly-installed valve on the Little Inch pipe line split open.

Six workmen were knocked flat, their clothes torn to shreds by the flying pebbles which the blast of rushing vapor whipped over the nearby area before it rose into the upper air. The injured, two of them seriously hurt, were taken to Lancaster General Hospital.

Traffic within a quarter of a mile of the break, was halted as police and volunteer firemen, fearing a fire, spread the warning of danger. The blockade was in effect for about four hours until the gas, which was lighter than air, rose and was blown away. Fortunately no fire resulted.

The 20-inch pipe line carries natural gas from Texas to the Atlantic Seaboard. The section affected by the explosion had been placed above ground temporarily while a new compressor station was being erected. Pressure was just being built up when the valve blew out. The break occurred in a flat field covering about thirty acres not far from the point where the pipe line is buried under the mile-wide Susquehanna River.

* * *

Ruse Brings Bit of a Dither, Really Old Chap!

Thirty British paratroopers, disguised in firemen's garb, and their borrowed fire engine, clanged their way merrily past heavily armed American soldiers to "capture" a United States air base headquarters somewhere near Up-

per Heyford, in the "tight little Isle" recently.

The headquarters 'fell" a few minutes after a war games exercise began. The ruse worked something like this: After 150 British Territorials, equivalent to U.S. National Guardsmen, leaped from planes at 700 feet with their own mortars, field guns and radios, thirty picked men dashed to a farmhouse rendezvous. Then, while their fellow-paratroopers deployed around the well-guarded base, the "firemen" blithly waved to United States troops and swept through the main gate, bold as brass, right up to the base headquarters. Then they discarded their firemen's costumes and mounted guard at the entrances.

All of which created a bit of a dither among the British and no end of red faces among Yankee soldiers.

* * *

Hot Off the News Ticker

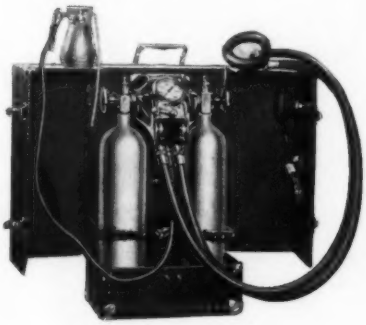
Firemen, called to fight a fire in a barn near Arzanc, France, August 18th, found no water supply. Not a bit dismayed they put out the fire with 1000 gallons of cider. What—no *Pinard!* . . . Wind-whipped flames roared across thousands of acres of forest land in British Columbia August 13-14, last, and officials reported twenty-two new outbreaks had raised the number of fires burning to 149. . . . Canadian Industries, Ltd., reportedly has developed a new type of covering for operating table pads, which, it is said, will prevent hospital operating-room explosions. . . . An earthquake tripped fire alarms and shook residents of Los Alamos, N. M., from a sound sleep at 2:45 A.M., on August 17th. Fire and police received a flood of calls wanting to know if the atomic city had been "atom-bombed." No damage, no injuries resported. . . . Fires destroyed large sections of two Philippine towns over the August 17-18 weekend, leaving 600 homeless. One fire razed a block in Tabaco, with estimated damage of $500,000. Another destroyed the business center of Marihojo, on the Island of Bohol, leaving 600 homeless, causing damage of $250,000. . . . Two British Vampire jet fighting planes collided in flight near Cardiff, Wales, on July 14, last, and falling debris killed a 57-year-old woman in an upper room of an apartment building. Both pilots parachuted to safety. . . . Near Dover, Del., an F-94 jet night fighter crashed and burned on August 13th, after a wing fuel tank dropped off, smashed through a house and injured its three occupants. Pilot and crewmen of the plane were severely burned. . . . Chlorine gas escaping from a Chemical Warfare Service plant at Niagara Falls blanketed about five city blocks the night of August 13th, last, driving many families from their homes. Although a few persons reported fumes made them ill, no one was hospitalized. "Security regulations prevent disclosure of details of the threatening disaster." . . . The explosive-laden U. S. freighter Princeton Victory and a British ship collided in the English Channel recently but fortunately no explosion or fire ensued. The American ship arrived under her own power, but damaged above the waterline in the area of a hold containing 65,000 empty tank rockets. Harbor officials of Rotterdam, Netherlands, checked the ship before unloading her to be certain there was no danger of an explosion. . . . Three dock workers were killed and two seriously injured at Leg-

Chief, If You Were at the I.A.F.C. Convention

You saw the new, improved Stephenson Resuscitators that were the talk of the show.

If you did not get to Boston, by all means you should learn about the new developments and new model resuscitators. They give greater protection to your community, make your job easier and more appreciated.

Send now for complete information without obligation



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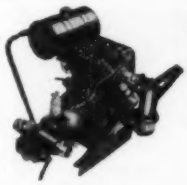

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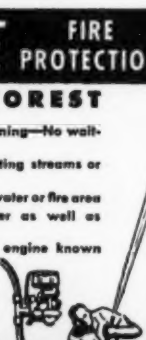

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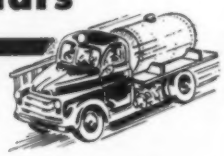
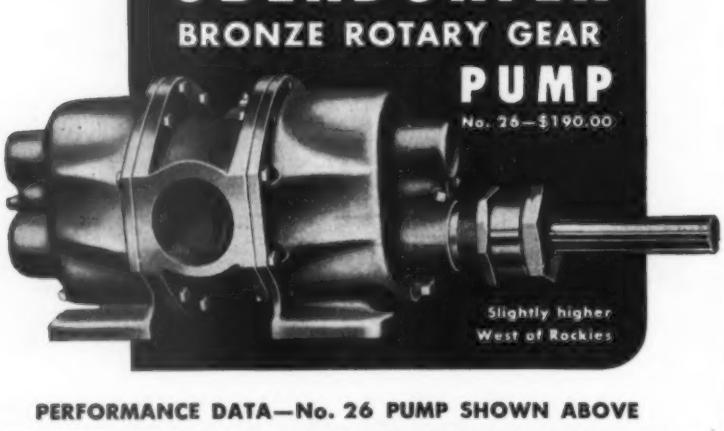


The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.



PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

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horn, Italy, when a wartime artillery shell they had fished from the harbor exploded on August 17. Three other men, who escaped injury, were arrested later because the group did not possess the necessary police license to recover scrap. . . . British firemen were called to aid other services and volunteers clear away muck and debris left by a deadly flash flood in Lynton which caused known death of 24 and left 7 missing. . . . A youth of 19 is blamed for the many phony bomb scares that have plagued police and fire forces of New York. The boy, a student of electronics at City College, was arrested as he left a phone booth. He confessed to phoning "warnings" to Grand Central Station, New York Telephone Co., and at least seven to a Bronx theatre. He did it "for thrills," he explained.

Conn. Firemen Elect

Capt. Edward F. Turbert, of the New Haven, Conn., Fire Department, was elected President of the Connecticut State Firemen's Association at the annual convention which took place on August 15 in Naugatuck. Capt. Turbert succeeds James L. Grote, of Chester, who held the post during the past year.

Other officers named were Thomas Martin, of New London, Vice-president; John Moehring, of Stamford, Secretary, and Charles H. Brundage, of New Haven, Treasurer. The Rev. Michael J. Thompson, of Niantic, was reelected State Chaplain.

The two-day affair closed on Saturday, August 16, with a huge street parade in which some 140 fire companies from Connecticut, Rhode Island and New York took part.

An interesting sidelight of the opening session of the convention was the resounding applause extended Edward J. Hickey, Commissioner of State Police. Commr. Hickey delivered a brief congratulatory talk to the firemen in his capacity as State Fire Marshal.

The greeting extended Mr. Hickey was in sharp contrast to the feelings of the Connecticut firemen last year when they vented much verbal wrath upon Commr. Hickey for his recommendation to Gov. John Lodge that a change in the anti-gambling laws of the state, heavily backed by the volunteer firemen, and approved by the State Legislature, be voted.

The association voted to hold the 1953 convention at Torrington.

TOM MAGNER.

Convention Dates

Sept. 29-Oct. 2—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Hotel Statler, Boston, Mass. Secretary, Irvin Shulsinger, 130 West Forty-Second Street, New York 36, N. Y.

Oct. 16-19—NEW JERSEY STATE FIRE COLLEGE. Annual meeting, Fort Dix, N. J. For information contact James T. McGovern, New Jersey State Safety Council, 24 Branford Place, Newark 2, N. J.

Oct. 20-22—THE NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting Kearney, Neb. Secretary-Treasurer, Russell D. Salak, P. O. Box 312, Schuyler, Neb.

Oct. 24-25—INTERNATIONAL RESCUE AND FIRST AID ASSOCIATION. Annual meeting, Asbury Park, N. J. President, Julian S. Wise, Box 441, Roanoke 5, Va.

Oct. 28-31—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Peoria, Ill. For information, contact Inspector Lester Manace, Peoria Fire Department.

Danish Naval Blast

(*Continued from page 757*)

year. He was called "the perfect fire officer" and spoke English, Swedish and Norwegian fluently. Every officer in the Copenhagen Fire Brigade must be a civil engineer; the highest grade to which a fireman can rise is that of "brandmaster," which is said to be equivalent to that of a fireman superintendent in London, or district or area chief in the United States.

Fog Nozzle Tests

(*Continued from page 766*)

able to furnish either a solid stream, a fog, or both simultaneously. This demand almost exceeds the carrying capacity of the supplying hose because of high friction loss. Such nozzles should be redesigned according to the size hose they fit. It might be desirable to place an upper limit on the total amount of water each nozzle discharges in relationship to hose sizes. Some nozzles now available show a wide discharge spread as the nozzle adjustment is used. This shows up very strongly on the pumpgage and makes the pump operator's task more difficult to produce a satisfactory stream.

c) The concentration of water particles throughout the discharge pattern.

d) The sizes of water particles discharged by various nozzles now available.

e) The sizes of water particles and rate of application best suited for use on fires of intensities usually found in normal occupancies. Fire departments are in need of more factual data to permit them to use water with greatest efficiency. This information should affect booster tank size, hose diameters, rate of application and technique of use in addition to nozzle design of Class "A" "B" and "C".

f) The more desirable control mechanism. Nozzles were controlled by a lever, by rotating barrel or by a trigger action. In some cases, the nozzle could go through the control action from shut-off to wide-open with rapidity. In others the action was complex. Firemen would have no way of knowing in which position the nozzle was, especially in a dark, smoke-filled room. Some nozzles were so designed that the control mechanism could rotate by itself under pressure, which is undesirable.

g) The susceptibility of each fog nozzle to clogging, and the ability to unblock itself or such obstructions. This is important in rural and industrial situations.

h) In the interest of achieving the foregoing objectives it is the final recommendation that a more comprehensive research program be instituted into the subject of the use of water in fire control. Such a program should be conducted by an impartial testing agency possessing the necessary facilities, staff and experience in this specialized field. Of necessity, such a project would have to be well financed, since the measurement of comparative extinguishing effectiveness under actual fire conditions would be quite expensive.

The sub-committee acknowledged the assistance of the following contributing agencies: American La-France-Foamite Corp., Elmira, N. Y.; International Association of Fire Chiefs; National Fire Protection Association, Fire Services

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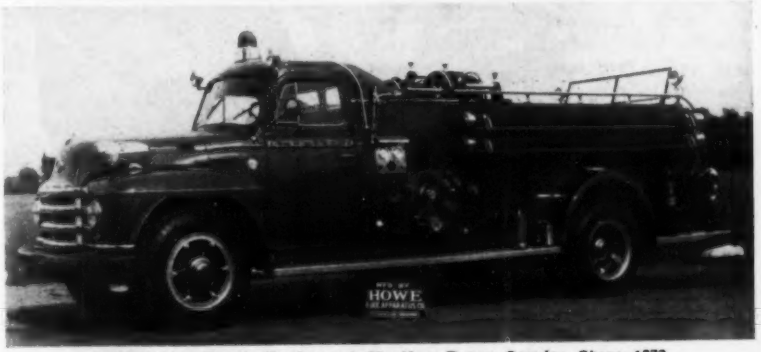

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Fire Apparatus Manufacturers

(*Continued from page* 754)

and the prevailing attitude was that the Association should immediately apply for de-control. Mr. Layden of Peter Pirsch Company reminded the meeting that when OPA controls were abolished after World War II, suppliers to the industry were de-controlled first which placed the manufacturers in an unfavorable position. He said every effort should be made to have that situation reversed this time. A motion to apply for de-control was made and unanimously adopted.

The matter of collecting, compiling and distributing an exchange of production information was brought up for discussion. It was recalled that at one time information of this character was collected by the Bureau of the Census, U. S. Department of Commerce. The Secretary was instructed to contact the Bureau of Census and try to have this government agency resume the collection and distribution of these figures.

It was agreed that in the event the government would not gather these figures that the Association should undertake the collection of such data.

The following directors, who served last year, were unanimously re-elected: Ernest L. Maxim, Joseph G. Grossman, R. B. Sargent, L. W. Young and P. E. Van Pelt.

At the close of the general meeting on Tuesday, the new Board of Directors met and elected officers. Frank James, head of the Fire Apparatus Division of Mack Motor Truck Corporation at Allentown, Pa., was elected President of the Association. Fred A. Waterous, President of the Waterous Company, St. Paul, Minn., was elected Vice President, and William F. Seals of William F. Seals Associates, Washington, D. C., was reappointed Secretary-Treasurer.

Blasting Caps May Be Set Off By Radio

Blasting has always been recognized as an operation that is accompanied by noises that justify unusual care in carrying out such operations. A new danger has been discovered as a result of research indicating that electric blasting caps can be set off by radio waves without any physical connection with the blasting circuit. The caps should be kept in a tightly closed metal can in the vicinity of any two-way transmitter.

As a result of research, the Columbus and Southern Ohio Electric Company has issued the following pertinent instruction:

Keep Radio Away from Blasting Caps! If you do blasting, or are in the vicinity of blasting, keep radio away from blasting caps or connected control wires. Radio-frequency energy from such sources as radio broadcasting stations, two-way radios, television transmitters, radar, shoran mica-wave relays, and high-powered amateur transmitters, can set off blasting caps without any physical connection with the blasting circuit.

The following rules shall be adhered

to at all times by employees driving company equipment with two-way radios:

1. If electric blasting caps are within 300 feet of any two-way radio transmitter, keep them in a tightly closed all-metal can. *Never* open the can when the transmitter is in use.

2. *Never* carry caps in a vehicle equipped with two-way radio unless the caps are in an all-metal box, composed of 24-gage iron, lined with wood.

3. *Do not* use a radio-transmitter within 300 feet of any electric blasting or connected control wires.

4. *Never* use a radio transmitter in or near a quarry, but notify the base station before entering a quarry.

5. *Never* use a radio transmitter while refueling a vehicle.

Correction

From various causes, three errors crept into the columns of the August, 1952, issue of FIRE ENGINEERING. They are:

Page 620. The self-propelled aerial truck shown at the top of the page was in service at Marion, Ohio, and not New York City.

Page 655. The burned-out light bulb involved in fire was of 150-watt size and not 1500 watts.

Page 660. Chief Roy S. Moulton is President of the Missouri Valley Division of the I.A.F.C., and not the Great Lakes Division. Chief Wayne E. Swanson, Rockford, Ill., is President of the latter.

Fire Service Ladders and Their Use

(*Continued from page 764*)

ladder is to be placed to the left of the ladder underneath, the ladder is brought up and swung in to the window as already described. The hook is placed on the window sill 18 inches from the left hand corner, and the butt swung over the back of the man building the chain. (See Fig. 19.) The ladder is taken out of the window in reverse order.

Importance of Life Net

As will be noted in the series of Figures illustrating these evolutions, the training ground is equipped with a life-net properly supported and guyed at about the height of an average man. Nets are an essential in performing such scaling ladder evolutions and many lives have been saved thereby. They should also be spread in all roof rope and rope sliding operations.

Many departments assign numbers to men of each crew engaged in drilling and training to facilitate orders given by the instructor.

Bells In—Public Alarm Out

Automatic bells have been installed in the homes of forty firemen including call men, of Roselle, N. J., to end the necessity of sounding the fire siren day and night and alerting the apparatus-followers and annoying the sleeping populace.

When an alarm is registered, all bells sound immediately with a coded signal. The siren will be used with bells only between the hours of 8:00 A.M. and 10:00 P.M.

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SEE PAGE 769

● *Right*—Cut-away view from right side of HALE Type ZL 2-stage 500 GPM Centrifugal Pump. The "ZL" Series fills a large demand for use in fighting fire with the popular 2-ton commercial truck, or fire chassis.

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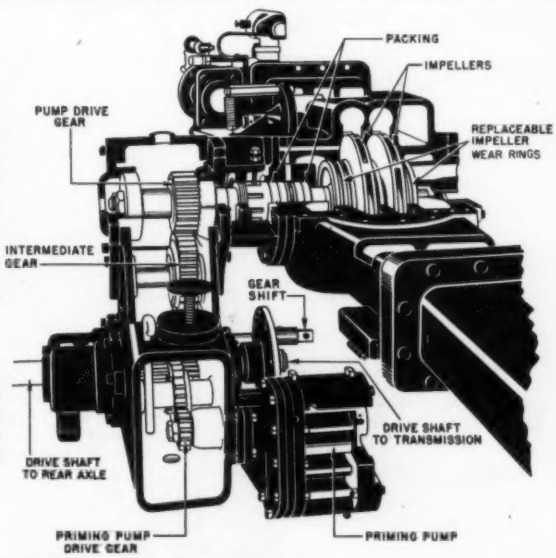

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USE OF POWER BOATS BY FIRE DEPARTMENTS

THE discussion in this Round Table is a continuation of that which appeared in the August issue on the use of power boats by fire departments.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the October issue as well.

Readers are invited to send in their comments on this subject which is described in the box on this page. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

Richard Harrigan, Chief, Hobart, Ind.: We maintain a 14-foot metal boat for emergencies.

This boat is used in drownings, rescuing marooned and lost boats and missing fishermen. We also patrol the lake when there are a lot of boats on it such as on holidays and celebrations. We have also answered calls from other cities in drowning cases.

Our boat is powered by an outboard motor.

We very definitely feel that the boat is a useful piece of equipment and believe that all departments near any body of water should maintain such equipment for emergencies.

George E. Hink, Deputy Fire Commissioner, Chief of Department, Philadelphia, Pa: We do not carry or maintain a power boat. We do carry a 10-foot work boat that can be used in emergencies for a life boat or for running a line ashore where boat cannot get close enough to the bank or bulkhead. It can be used under piers when tide is at the proper stage, and is used when crew is painting over the side on the hull. This is built of waterproof plywood, propelled by oars. We have tried an outboard motor on it and it responds very readily.

Although we do not carry a motorized small boat at present, I believe they are a useful and necessary addition to the fire boats' equipment as they can be utilized in many different ways, such as a dispatch boat when more than one fire boat is being used on a multiple alarm fire, carrying injured ashore if necessary, and for life saving where the water is too shallow for the fire boat to get in, and many other ways.

The Philadelphia Fire Department is planning the addition of power boats in the very near future.

O. E. Boegess, Chief, Charleston, W. Va.: We have a row boat in our department. It is of metal construction and weighs but 115 pounds. It is taken to the place of emergency by the first aid truck. It has been used in drownings and to evacuate people from inundated areas due to abnormal rains.

Our boat is very useful and a "must" in our department.

J. F. Finnegan, Chief, Richmond, Va.: We maintain an outboard motor boat for emergencies. This boat is used for rescue work in the various quarry holes and ponds and also the river. We have used it to a great advantage in rescue work.

Bernard J. Padgett, Chief, Alexandria, Va.: We maintain two aluminum boats. These are used for dragging and rescue operations. They are usually powered manually with oars, but a motor is available. We have found them to be very useful.

George E. Renken, Chief, Laredo, Tex.: Although we have some big inland lakes nearby, we do not maintain a power boat for emergencies. We are often called to look for bodies or to rescue people, but there are many citizens who gladly offer their boats to the department at a moment's notice.

Needless to say, a boat is a very useful piece of equipment, especially for us here where we have a river that once in a while goes on the rampage and we have to rescue people in flooded areas.

Ambrose Saricks, Chief, Wilkes-Barre, Pa.: Boats are maintained by the police department. Some have outboard motors and some just oars. These are used to remove people from the river in case of drownings and in the past have been used during high water.

We have in the past operated boats during high water, but now with the flood control system of dikes and pumping stations along the river, this is not necessary. Now the boats are manned by the police department in

HERE IS THE TOPIC

1. **Do you maintain a power boat (or boats) in your fire department for emergencies?**
2. **For what purposes is the boat (or boats) employed?**
3. **Is the boat (or boats) powered by inboard or outboard motor?**
4. **Have you found it a useful piece of equipment?**
5. **If you do not at present maintain a boat (or boats), do you believe it would be a useful addition to your equipment? In what way?**

case of an emergency and are stored in the various pumping stations along the river.

Roy Rowe, Chief, Klamath Falls, Ore.: We do not maintain a boat in our fire department. We could use one as we have two lakes (Lake Ewauna and Upper Klamath Lake), one short river (Link River) and the Government Canal within our city limits. This Government Canal claims at least one life every summer. We have to depend on the sheriff's office and private owners to get boats in case of drownings. These boats are both inboard and outboard.

There have been times when we have had to wait anywhere from twenty minutes to forty minutes for a boat.

If we had an outboard motor and metal boat on a trailer, I know it would be a very useful piece of equipment.

Lee P. Harrington, Chief, Waco, Tex.: We maintain three outboard motor boats in our department. These have been used for rescue from water accidents, recovery of drowned persons and removal of marooned people.

We have found these boats to be very useful pieces of equipment. They have helped establish better public relations, in that we have answered calls within a radius of 50 miles of Waco and have always had the fullest cooperation of private citizens, although we have sometimes been on a job for thirty-six hours or longer. A major part of the equipment has been donated by public-spirited citizens.

Lewis A. Marshal, Chief, Providence, R. I.: We have one inboard motor boat and two outboard motor boats. These are used for life saving purposes, for dragging for victims and for fire fighting purposes under the many docks on the Providence River.

Because of the many ponds we have many calls. Our two rescue companies each have a 14-foot aluminum boat and Johnson 5 hp Sea Horse motor. Many lives have been saved and many victims recovered. On a call from a pond the rescue company responding takes the boat with them on a trailer.

Edward E. Wischer, Chief, Milwaukee, Wis.: The fire department has only fireboats in service, and they are primarily for fire service. However, they are utilized for emergency rescue activities if practicable.

Other facilities are available in Milwaukee for this purpose. The police department has a boat. The Coast Guard is stationed on our lake front and has boats available at all times. In addition the sheriff's department also has boats available for rescue activities. In view of the foregoing, it does not seem necessary for additional boats to be manned by the fire service for ordinary rescue activities.

George J. Staley, Chief, Wisconsin Rapids, Wis.: We maintain a boat here in the fire department for emergencies. This boat is a 16-foot rowboat, equipped with oars, outboard motor, drag hooks, etc. We are at present building a trailer for hauling this equipment.

This boat is used for all types of emergencies around lakes, rivers and other bodies of water. On one occasion we gave the police department aid in catching a wood poacher on an island.

Everything taken into consideration, I would say it is a very useful piece

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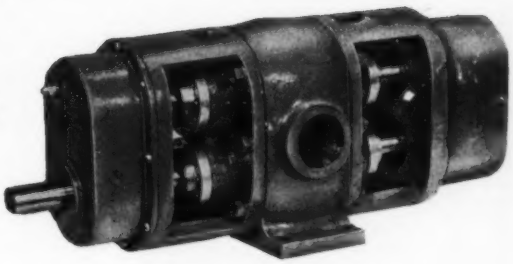

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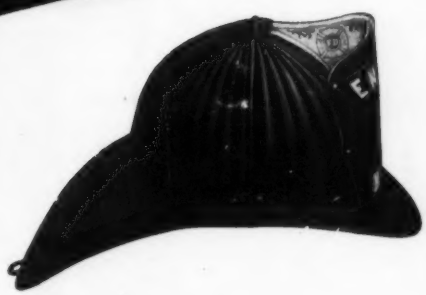

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of equipment. However, it is like many of our special tools in the fire service. We don't use it very often, but when we need it, it is necessary. At the present time the fire service is getting called for every type of emergency service imaginable; therefore, it is almost necessary that a fire department have at its disposal a boat for emergency water rescue purposes.

For a fire department to get an emergency call for water rescue service and not have a boat available is almost like responding to a fire call without an axe or forcible entry tools. The public is more and more depending on the fire service for this type of emergency work. Therefore, it is mandatory that equipment of this type be included in the inventory of each department.

J. N. Farmer, Chief, Petersburg, Va.: We have owned an outboard motor for ten years and find it most useful in rescue work and life saving on lakes and rivers surrounding the city. We also find it necessary for dock fires and floating bogies.

G. R. McAlpine, Chief, Oklahoma City, Okla.: We maintain four outboard motor boats and one power boat with an inboard motor. These boats are kept serviced and are ready for immediate use in case of an emergency.

The boats are used strictly on an emergency basis. This covers drownings in lakes and streams. They are used to recover drowned bodies and under flood conditions where people are marooned and the fire department is called upon to assist.

The four outboard motor boats are equipped with oars and life preservers. The inboard motor boat is kept on one of our lakes as an emergency boat and is equipped with a 150-gallon per minute pump and 4 K.W. light generator.

We have found these boats a useful addition to our emergency equipment. The men can work more quickly and more efficiently if they use their own equipment.

The cost of providing such equipment is low and the maintenance is nominal. The storage is small and it is more efficient to be able to respond to this type of an emergency without delay than it would be to try to borrow a boat. The equipment is not always available if it is owned by others.

L. R. Julian, Chief, Lawton, Okla. A boat would be a very useful piece of equipment. In the years before World War II, we had a boat for emergencies. The boat proved to be of untold value. We had calls for it and our rescue equipment and diving gear from here to Pampas, Texas; down on Red River and to the eastern part of the state.

We have about thirty lakes in our immediate vicinity. The boat was very useful in searching for, locating and recovering drowned persons; rescue of stranded people because of high water and for other numerous jobs for the city and county.

Wilson McLaughlin, Chief, Sandusky, Ohio.: We do not maintain a power boat in our department. We have a row boat that we use in drowning cases. We can use an outboard motor on it if we so desire.

We have used our boat many times since we purchased it in 1938.

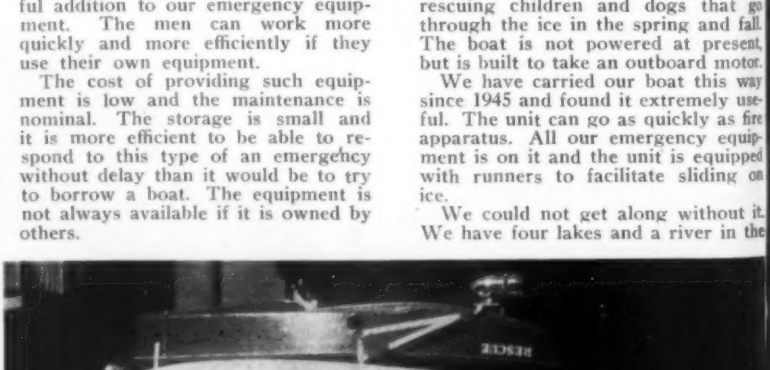
I believe that a rescue boat is a necessary piece of equipment for any department that is located anywhere near water. We have never used a motor on our boat in dragging for a body; a person does not have the feel of the grappling hooks when dragged by power as he does when the boat is being rowed. Then too, if the hooks become snagged, you are more liable to loosen the hooks if you are using a motor for power.

Carl H. Smith, Chief, Saranac Lake, N. Y.: We maintain a 12-foot plywood boat which is carried on the emergency truck at all times. Truck is also equipped with resuscitator, 4 sets of grapples, blankets, stretchers, traction splints, first aid equipment, extra tanks for resuscitation and 1500-watt portable Homelite equipment with 300 feet of wire.

The boat is used for rescue purposes, dragging for drowned persons and for rescuing children and dogs that go through the ice in the spring and fall. The boat is not powered at present, but is built to take an outboard motor.

We have carried our boat this way since 1945 and found it extremely useful. The unit can go as quickly as fire apparatus. All our emergency equipment is on it and the unit is equipped with runners to facilitate sliding on ice.

We could not get along without it. We have four lakes and a river in the



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corporation limits and every year have children and dogs that go through the ice, as well as tip-overs and drownings during summer and fall seasons.

D. E. Drennen, Chief, Marietta, Ohio.: We do not have any power boats in our department. However, we have two wood John boats, which are used during high waters. These are equipped with a portable pump and use 1½-inch hose.

Efforts have been made to have the city purchase two aluminum boats with outboard motors, but it has not been done because of finances. Boats are very useful pieces of equipment for any department having the conditions we have.

We have floods about every three years or four years. So far we have been lucky with fires in flooded areas, but it may not always be that way. Since we have two rivers in our vicinity we have to handle a number of drowning cases in Summer. Wood boats are too heavy to manipulate.

Walter G. Strickfaden, Chief, Columbus, Ohio.: We have two rowboats which we use for emergencies. Outboard motors can be attached when necessary.

We have three emergency squads in the department fully equipped for first aid emergencies. These boats are part of the squad equipment to be used in water rescue.

Columbus is situated on the Scioto River. There are also other rivers and streams surrounding the city, i.e., Big Walnut Creek and the Olentangy River. In addition, there are deep pools in quarry sites, all of which attract swimmers and bathers in the summer months and as a result many drownings occur and water rescue becomes necessary. In our department, boats are an absolute necessity for emergency work.

F. J. Wells, Chief, Fargo, N. D.: We maintain an outboard motor boat for rescue and flood work. We have found it a very useful piece of equipment and it has paid for itself many times.

Raymond C. Rumery, Chief, New Rochelle, N. Y.: We maintain a combination harbor patrol and fire boat. We have nine miles of shoreline to patrol.

The boat is forty feet in length and powered by two 150 HP Sterling petrel engines and equipped with a 500 GPM Barton fire pump driven by a Ford V-8 motor and the usual fire fighting equipment.

The boat is manned by a member of the uniformed force and an employee of the Park Department. At present it is on duty from 8 a.m. to 8:30 p.m. daily.

It has been found generally useful for patrolling and for fire fighting.

W. H. Mitchell, Chief, St. Joseph, Mo.: We have a power boat in our department. It is a portable boat powered by an outboard motor.

Our city is enclosed on three sides by water, Lake Michigan and the St. Joseph River. We use this boat in emergencies such as drownings, and occasionally in flooded areas. It also is available for use any place in the county by the Sheriff's Department. When you need a boat, nothing will take its place.

Ray D. Wells, Chief, Falmouth, Mass.: The Falmouth Fire Department does not maintain a boat of any kind, but one is maintained by the police department with all necessary rescue equip-

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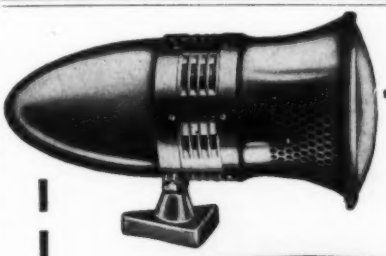

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ment for our many ponds, lakes and seashore areas. The fire department rescue crew works closely with the police department and while the boat is being used to make the water rescue, the fire department is on shore with resuscitator and like equipment ready to take over. Both departments are very familiar with the latest methods of prone reviving of life.

If circumstances require larger boat equipment, we have arrangements with two of the ship repair yards to furnish us equipment for rescue, but generally this is taken care of by the Coast Guard.

An outboard motor can be used, but we have found that the delay in installing and in getting the motor in use is greater than with the use of oars because the place of rescue is closest to the place of launching the boat from the trailer. We average four or five rescues each summer season.

Joseph A. Giammatteo, Chief, Glen Echo, Md.: We maintain a boat and trailer for services such as rescue of people from the many rocks and small islands of the river and grappling for drowned persons in the Potomac River between the District of Columbia Line and Great Falls, Md. This boat is equipped with an outboard motor.

Lawrence A. Wolfe, Chief, Covington, Va.: This department has maintained two steel boats powered with outboard motors for rescue work for the past eighteen years. These are mounted on trailers. Demands upon the department to perform such duties prompted the organization of a life saving crew within the department which has been very successful.

Barney J. Houston, Chief, Cincinnati, Ohio: We maintain two former landing craft purchased from the Federal Government. These are powered with 140 H.P. Chrysler motors and equipped with 750 G.P.M. Hale pumps. They are quartered in stations with land companies. They travel forty-five miles an hour through our streets before going into the water and travel about ten miles an hour in the water.

Zephrin F. Drouin, Chief, Lewiston, Me.: A boat is provided by the police department and the sheriff's department. We are frequently called to assist them in drownings and rescue operations.

I believe all such necessary equipment should be maintained by the fire department, as they are the branch of public safety entrusted with the protection of lives and property.

In past years this department has had many odd rescue operations, and we have found it convenient to have a boat in the department. We have had to rescue dogs that have gone through the ice. Not having a boat the department used a 50-foot ladder only to have it go through the ice with the rescuing fireman. Both the dog and fireman were landed safely after a trying ordeal. It is wise to look ahead in such matters and be prepared for the unexpected.

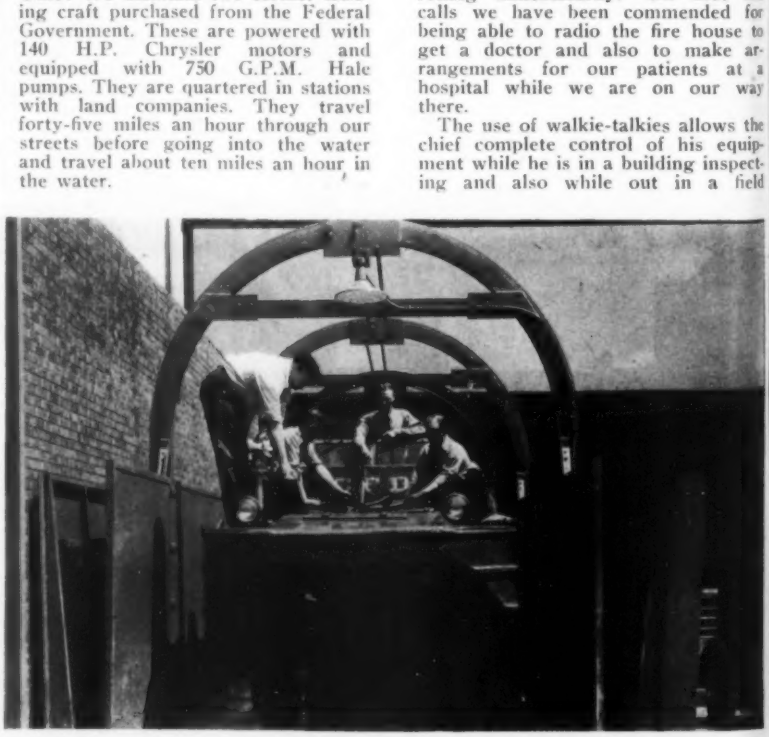
* * *

The following replies are in answer to a previous Round Table on the use of radio.

James Beringer, Ex-Chief, Bernardsville Fire Co. No. 1, Bernardsville, N. J.: Two-way radio is used on all apparatus. We have three 750-gallon pumpers and a Dodge emergency truck equipped with 50 watt transmitters and receivers. Our main station is a 150 watt set and we operate alone, no one being on with us. Our local police car is hooked up with a county police band. We also have two walkie-talkies, one on our emergency truck and the other on one of the pumpers.

Considerable time has been saved through the use of radio, and wear and tear on equipment has been put at a minimum. We can call back from fires, thereby saving other trucks from rolling unnecessarily. On first aid calls we have been commended for being able to radio the fire house to get a doctor and also to make arrangements for our patients at a hospital while we are on our way there.

The use of walkie-talkies allows the chief complete control of his equipment while he is in a building inspecting and also while out in a field



Fire fighting "Duck" raised to street level and ready to respond to alarm at Cincinnati

fighting a grass fire. Our first aid captain also benefits when his work takes him off the road away from all equipment.

We feel we were one of the pioneers in radio, especially in the volunteer fire department field, starting early in 1946. We are all volunteers and the community is small, making us that much prouder of our equipment. We operate on 154.43 band.

Radio is a great asset to fire companies, especially volunteer fire companies, where manpower is a big item. It saves a great deal of time, use of equipment and manpower. It should more than prove itself able to improve public relations in the future.

Lloyd B. Dickson, Chief, Provo, Utah: We are 100 per cent three-way radio equipped including walkie-talkies, and have been for several years.

I believe the use of three-way radio is one of the greatest advancements in recent years both in fire control and also in fire prevention programs.

It seems we are continually finding new uses and applications for our radios, for, in addition to using them for "turnaround," to coordinate engine companies responding to fires, to keep companies "in service" while away from the station, using radio for company inspections and many others, we have a system which is very valuable to us especially in residential and scattered areas.

We have located every fire hydrant on a map in our alarm office. And, on every fire call, our dispatcher radios the exact location of the nearest hydrant to the trucks while they are enroute to the fire. Thus the Officer in charge can plan his strategy, and the operator knows how to approach the scene.

Especially valuable is the freedom that radio allows us in our drill and evolution programs.

Drivers are assigned apparatus every day to drive around town in order to familiarize themselves with the brakes, steering, pump operations, etc. We think by so doing they are much less likely to be involved in an accident, and are much more confident and efficient on actual runs. Too, with shorter work weeks this is important as we now have several operators assigned to each unit.

Better coordination can be worked out between operator and officers at fires. Equipment can stay at scene of fire longer.

Companies could make inspections and still stay in service on radio.

Radio provides communication facilities to allow companies to make appearances before gatherings.

T. R. Tillett, Chief, Bremerton, Wash.: Seventy-five per cent of our vehicles are equipped with three-way radio.

We use radio in a "turn-around" system.

Radio is used between trucks at fires for giving directions.

G. L. Simpson, Chief, Phoenix, Ariz.: All our apparatus is equipped with three-way radio. We use it in a "turn-around" system.

I believe portable radio receiver and transmitter should be used as an auxiliary fire alarm system. It can also be used in giving instruction between companies in laying hose lines, etc.

Home inspections can be undertaken without taking the company out of service.

(*Continued on page* 802)

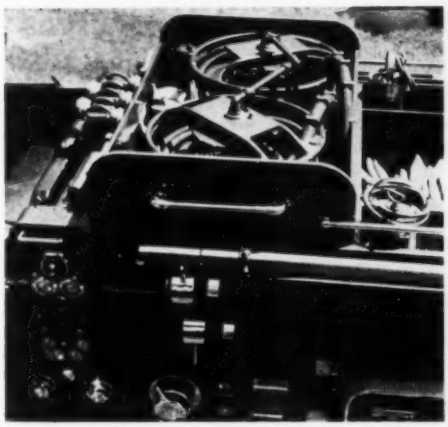
THE ZIERDEN REEL

. . . INVESTIGATE THE ADVANTAGEOUS FEATURES

THE NEW HORIZONTAL COILING ZIERDEN REEL

gives you:

- Equal diameter hose coils throughout length of hose.
- Loose coils, complete absence of strain on hose while coiled.
- Large hose coils to eliminate tangling.
- Fast payout of hose.
- Remote operation.



for further information write

THE ZIERDEN COMPANY

3817 SO. K.K. AVE., MILWAUKEE 7, WIS.

ONAN

Emergency Electric Plants *for Civil Defense*

No matter what happens to central station power during a bombing attack, electricity for essential defense needs is always available with Onan Electric Plants. Onan units, mounted on truck or trailer, or carried in the trunk of a car, can be rushed to any point where power and light are needed. Sturdy and dependable, Onan Electric Plants are an important link in a city's defense against disasters of any kind.

Write for folder

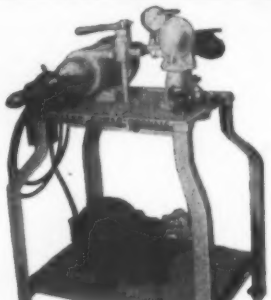
Power & Light for Every Need

Portable, Mobile, or Stationary
400 to 35,000 watts. A.C. or D.C. models.

Onan PRODUCTS

D. W. ONAN & SONS INC.

5706 UNIVERSITY AVE., MINNEAPOLIS, MINN.



IN ANY FIRE STATION

LARGE OR SMALL . . .

DAYTON HYDRAULIC EXPANDER

MEANS BETTER HOSE CARE

Expands Couplings from ¾" to 6" Size
Tests Hose Up to 700 Lbs.

Extra Attachment Removes Expansion Rings from Old Hose
More Pressure — Larger Motor — Roomier Work Table

Regardless of the size of your department, there is an Expander for your requirements.

Send for Illustrated Bulletin

Dayton Fire Equipment Co.
1242-48 W. 2nd St., Dayton 7, Ohio

WHY WASTE MAN POWER?

The TL will stop traffic for you. Portable, battery-operated, warning signal or flare. Red fresnel lens, flashes a 360-foot beam 60-80 times per minute.

All cast aluminum. Complete with flasher, switch and chain.

Battery not included.

ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

News of the Manufacturers

P. R. Larimer Made Sales Manager

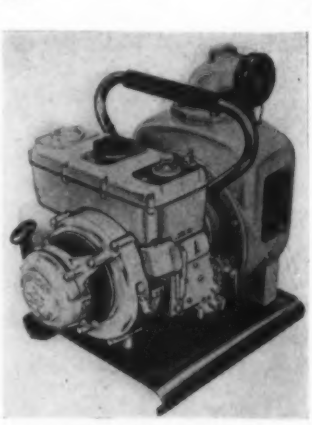
Ansul Chemical Company, Marinette, Wisconsin, has announced the appointment of Paul R. Larimer as General Sales Manager in charge of all four sales divisions: fire extinguisher, refrigeration, industrial chemicals and export.

Paul R. Larimer

This is a new post created by the company to help supervise and coordinate the company's sales expansion. Mr. Larimer formerly supervised the company's government relations program and served as Assistant Sales Manager of the Fire Extinguisher Division. At one time, he was co-owner of Thunderbird Sales Corp., Phoenix, Arizona, a distributor of Ansul fire extinguisher equipment.

McCulloch Introduces Portable Fire Pump

A new, gasoline-powered pump, for portable duty in fire-fighting work, has been announced by McCulloch Motors Corporation, Los Angeles, California. The new self-priming, centrifugal pump weighs 57 pounds complete, and has a capacity of 15,000 gallons per hour. It delivers water at pressures up to 100 pounds.



New McCulloch Portable Fire Pump

This engine, which is the two-cycle type, develops seven horsepower at 4,500 rpm. It is a modification of the engine on the McCulloch 7-hp chain saw.

In addition to easy portability, the new fire pump has other novel features. Its starter is an automatic-rewind, cable type. Lubrication is obtained entirely from the fuel mixture; no greasing or separate oiling is required. The impeller, which is a non-clogging design, is mounted on the engine shaft, eliminating bearings in the pump. Engine speed is controlled by a centrifugal governor.

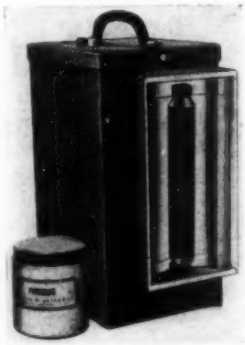
Gamewell Makes Appointments

The Gamewell Company, Newton, Massachusetts, announces the appointment of J. C. Hicks to the post of Pacific Coast District Manager. He will make his headquarters at the Company's Pasadena office and will have full responsibility for the direction of Gamewell operations on the Pacific Coast. Mr. Hicks graduated from Northeastern University in 1928 and joined Gamewell that year.

A. N. Johanson has been appointed Special Representative for Gamewell in the Pacific Coast District. Mr. Johanson has served in many capacities with The Gamewell Company since 1920. His duties will include engineering and special assignments. Mr. Johanson will continue to make his headquarters at the Gamewell Pasadena office.

Detector Kit for False-Alarmers

George W. Gates & Co., Hempstead Turnpike and Lucille Avenue, Franklin Square, L. I., N. Y., have recently introduced a kit to assist authorities in apprehending false alarm senders. This kit, named the "Raymaster," involves the use of "black light" and a fluorescent tracer cream.



Raymaster Detector Kit

This cream is spread on the handle or hook of the alarm box. Any person turning in an alarm will transfer the cream to his hands or fingers, and repeated washing will not remove the telltale fluorescence of the cream. It is nontoxic, non-corrosive, and fluoresces a brilliant yellow-green under the rays of the "black light" lamp.

By employing this method and equipment, proof can be obtained by the examination of the suspect's hand. Also, a member of the fire department can mingle with the crowd, carrying the "black light" lamp, and examine the hands of people inconspicuously. This usually results in catching the guilty person on the spot.

The "Raymaster" detector kit contains a four-ounce of "Firebug" Tracer Cream, and a "black light" unit which consists of a lamp and battery housing

with the necessary ballast for the operation of the lamp.

The unit is portable, operating from two standard 45 volt B batteries. It is light in weight (12 lbs.) and can be carried as a hand unit. Best results are obtained if the examination is conducted in semi or complete darkness.

Fyr-Fyter Announces New Pressurized VL Extinguisher

New one and two-quart vaporizing liquid fire extinguishers designated as Pressured Model B are announced by The Fyr-Fyter Company. Advantages daimed are fast, one-hand operation with accurate control; powerful 30-foot stream; elimination of pumping or other manual operations; liquid completely discharged in 17 to 25 seconds by odorless, non-toxic, moisture free pressurized nitrogen.

Pressurized Model B Extinguisher

The new product permits simple inspection, cleaning and recharging. It has a visual gauge to show pressure condition. It bears U. L. approval seal. Particulars may be had from the Fyr-Fyter Co., 221 Crane St., Dayton, Ohio.

Protectoseal Literature

The Protectoseal Company, of 1920 S. Western Avenue, Chicago 8, Ill., has recently issued two bulletins of interest to the fire service. The first, entitled "New Protectoseal Safety Products" illustrates and describes the various safety devices produced by that company. Included in these products are approved oily waste cans, safety cans, laboratory can with tilt frame, tank stand, drip can, wash tanks, dip tanks, spray gun container, torch filler can, drain can and various other safety type cans.

The other bulletin, entitled "Flammable Self-Checking Chart," should prove very useful to fire inspectors. It incorporates a large fund of information on hazards involving flammable liquids and includes a chart for checking hazards incidental thereto.

New York, N. Y., has included in its budget requests for $87,500 for plans for $2,300,000 fire college and training school in Long Island City, Queens; $2,500,000 to replace fire equipment used for at least 25 years; and funds for construction of 36 new fire houses.

Better Hose Care---
with CIRCUL-AIR
UL SA
THE AIR CONDITIONING
FIRE HOSE DRYER

PATENTED

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. NO OTHER DRYING METHOD IS SO FAST—SO ECONOMICAL—SO EASY TO USE.

ACCEPTED • APPROVED • RECOMMENDED

ACCEPTED as the standard drying medium in over 1500 fire departments — APPROVED by the leading testing laboratories — RECOMMENDED by fire hose manufacturers and Fire Chiefs "all over America."

If you are building, send for free copy of "Fire Station Design"

NEW HOSE DRYING MANUAL TELLS HOW TO DRY, STORE AND CONSERVE FIRE HOSE
May we send you one?

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

McINTIRE GATE VALVES

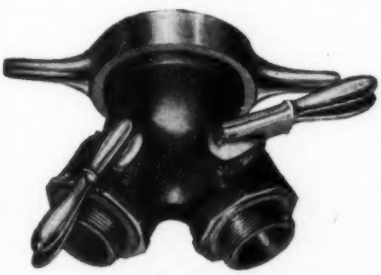


Fig. 164AN
4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

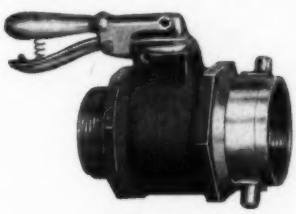


Fig. 163
Made either Right Hand or Left Hand 2½" male x female, gate valve.

F. N. McINTIRE BRASS WORKS
377 PUTNAM AVE., CAMBRIDGE 39, MASS.
1837 - - - - - - - - - - - - - 1952

Morning Pride
FIRE SUITS

Rubber or Duck
FLEECE LINED
•
NEW DOUBLE DUTY CHEST PROTECTOR
For Summer fold together and snap to coat.
For Winter unsnap for full protection of chest.
SUSPENDERS
MITTENS
GLOVES
DETACHABLE LININGS

See Your Local Dealer or Write
MORNING PRIDE MFG. CO.
1986 HOME AVE., DAYTON 7, OHIO

The Round Table

(*Continued from page 799*)

Clyde Dunn, Chief, Omaha, Neb.: Only ten out of our thirty-six units are equipped with three-way radio to date. This was installed as of April 11th of this year. We hope ultimately to be 100 per cent equipped.

We use radio in a "turn-around" operation.

Frank Briers, Chief, Victoria, B. C.: Approximately eighty per cent of our vehicles are equipped with three-way radio. We hope ultimately to be one hundred per cent equipped.

Radio is used in a "turn around" system.

William B. Hunt, Chief, Haverhill, Mass. All our apparatus is equipped with two-way radio.

We use it in a "turn-around" system.

Our inspector's car is equipped and we have company inspections with one man staying with the radio.

G. A. Mitchell Chief, Opelika, Ala.: About forty per cent of our vehicles are equipped with three-way radio. We hope ultimately to be fully equipped.

We use radio in a "turn-around" system, and it is used in making company inspections.

R. J. Farley, Chief, Atlantic City, N. J.: Our chiefs' cars are equipped with two-way radio, but we do not expect to be fully equipped for some time insofar as other fire department vehicles are concerned.

Harry E. Whitcomb, Chief, Pueblo, Colo.: Our apparatus at this time is about seventy per cent equipped with three-way radio. Chiefs cars are also equipped with three-way. We hope to be fully equipped within the next two years.

We use the "turn-around" system with radio.

Radio can be helpful in improving fire control and extinguishment by transmitting alarms from one company to another at fire stations from headquarters. There can be communication between pump operator and chief on hose test layouts. Companies responding to bad fires can call for additional companies before the first assignment reaches the fire where it is possible to size up the fire before reaching the scene. Other companies can be dispatched to a fire in the event of breakdown or accident. In an emergency the chief can keep in contact with his department from any part of the city. Close cooperation between fire and police departments can also result with the use of radio.

Walkie-talkies can be used in conjunction with inspections.

Rate $8 per inch less 10% for three or more consecutive insertions.

Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

! CLOSE OUT SALE !
SAVE MONEY
HOSE & ACCESSORIES AT GREATLY REDUCED PRICES

UNUSED SURPLUS

1½"x50' DJ CRL fire hose, unused, but soiled..... $ .58 ft. cpld.
2½"x50' DJ CRL fire hose, unused, but soiled..... $ .78 ft. cpld.
1½"x50' SJ CRL fire hose, unused, but soiled..... $ .29 ft. cpld.
2½"x50' SJ CRL fire hose, unused, but soiled..... $ .49 ft. cpld.

UNUSED & CLEAN FACTORY PACKED

1½"x50' SJ CRL fire hose.... $ .37 ft.
1½" Couplings attached... $ 4.50 set
2½"x50' SJ CRL fire hose.... $ .64 ft.
2½" Couplings attached... $ 6.75 set
2½"x10' Hard suction hose... $14.50 lgth., cpld.
1"x50' Booster hose ..... $ .33 ft.
4"x16' DJ Soft suction hose, 4½" couplings, long handle female..... $16.50 lgth., cpld.

BRASS ITEMS

1½" fog nozzles, 3 position (Well Known Brands) w/4' applicator...$22.50 *
Mechanical Foam Playpipes (Leading Manufacturer) w/adapter (Cost $50.00 ea.) .....$ 8.50 ea.
2½" Shut off nozzles w/ladder hook...$37.50 ea.
2½"x1½"x1½" leader line siamese w/quarter turn valves.....$24.50 ea.
2½" nozzle holders .....$ .95 ea.
2½" hose caps & chains.....$ 2.50 ea.
2½" double females .....$ 7.50 ea.

* Complete.

IMMEDIATE DELIVERY

TOWSON HOSE & RUBBER CO.
104 West Joppa Road,
Baltimore 4 ,Maryland
Phone Towson 1672

AMBULANCES FOR SALE

1951 SUPERIOR-CADILLAC
1949 METEOR-CADILLAC (sanders), 100%
1948 FLXIBLE-BUICK (low mileage)
1947 S. & S.-CADILLAC (100%)
1946 FLXIBLE-BUICK (very reasonable)
1941 SUPERIOR-CADILLAC (8pec. Built)
1941 MILLER-CADILLAC (2 level floor)

Fully equipped, ready to operate, guaranteed.

SUPERIOR-CADILLAC DISTRIBUTOR
WOLFINGTON BODY CO., INC.
33rd & Arch Sts., Philadelphia 4, Penn.
BAring 2-5252

Showroom, Parts & Service:
5801 Lansdowne Ave. Phone: TR 7-8882

SURPLUS FIRE HOSE
1952 PRESSURE TESTED

Excellent grade of used fire hose obtained from U.S. Navy replacement. Complete with couplings. Every length inspected and water tested at listed pressure. Guarnteed unconditionally with money back if dissatisfied.

HOSE TESTED AT 200 LBS. PRESSURE
1½"x50' SJ. Coupled....24¢ ft. or $12.00 length
2½"x50' SJ. Coupled....35¢ ft. or $17.50 length

HOSE TESTED AT 300 LBS. PRESSURE
1½"x50' DJ. Cpld. IPT ..33¢ ft. or $16.50 length
1½"x50' DJ. Cpld. NST ..40¢ ft. or $20.00 length
2½"x50' DJ. Coupled ....54¢ ft. or $27.00 length

SEND FOR SURPLUS CATALOG S-52

FIRE FIGHT SURPLUS SALES
1355 South Flower Street
Los Angeles 15, California

FOR SALE

One 1928 Boyer Apparatus, 500 G.P.M. Hale Pump, 150-gallon booster tank, fully equipped. Can be seen at:

TRAUTWEIN'S, INC.
Woodbridge, N. J.

REPRESENTATIVES WANTED

Old Well Established Firm has available several choice territories for aggressive and experienced Representatives capable of selling Municipalities. Line includes Fire Trucks, Extinguishers, Hose and Allied Products. Write Box No. 385, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

GOVERNMENT USED FIRE APPARATUS

750-gallon Hale pump, Continental 190 h.p. Engine, thoroughly reconditioned, repainted, lettered, complete with new equipment and guaranteed to pass underwriters test. $2,950.00. Without repainting or equipment, price $1,950.00. FOB Boston, subject to prior sale.

GORHAM FIRE EQUIPMENT CO.
30 India Wharf, Boston 10, Mass.

TERRITORY AVAILABLE

GEORGIA—Top ranking builder of custom fire apparatus desires aggressive dealer or representative to handle sales in State. Box 350, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

TERRITORY AVAILABLE

OHIO-W. VA.-PENN.—Experienced fire truck representative wanted to handle well known line of apparatus in tri-State area. Replies held confidential. Box 355, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

POSITION WANTED

Firefighter, 7 yrs. exp. Air Force and Fed. Gov. Engineer, driver, mech. Desires secure Fire Dept. job. Anywhere in U. S., if housing is available. Age 34, married, 1 child. 1 yr. college eng. Will travel for interview. G. Christensen, 3736 N. Bell Ave., Chicago, Ill.

FOR SALE

500-gallon American-LaFrance Pumper. All standard equipment plus many extras. Pictures and price on request. Delivery at once.

Contact:
FRED J. PROBST
224 No. Midland Avenue
Upper Nyack, New York

DEALER WANTED

Top-flight dealer wanted to sell outstanding line of fire trucks in South Carolina. Full factory co-operation, prompt delivery. Reply Box 360, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE

1938—500-gallon Pumper with 300-gallon Booster Tank with 24-ft. Ladder—Pike Pole—Bell—Crow Bar—200 ft. Booster Hose—Nozzle—Foam Extinguisher—1 CO_2 Fire Extinguisher—First Aid Kit—Two 700 Big Beam Spotlights. In good operating condition and ready for service.

WRITE—BOX 7, OLDWICK, NEW JERSEY.

FOR SALE

One Maxim City Service Ladder Truck, Year 1926—in good condition. Can be seen at Lawrence-Cedarhurst Fire Department. Can be delivered immediately. Submit all bids in writing to:

THE LAWRENCE-CEDARHURST FIRE DEPARTMENT
75 Washington Avenue
Lawrence, L. I., New York

Janesville
TURN OUT SUITS

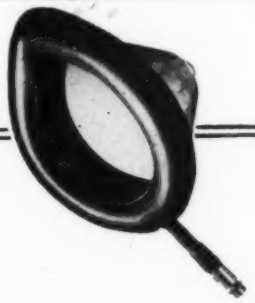
THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Coat in photograph is trimmed in Scotchlite . . . it's highly reflective in the dark for your protection.

Coats and Bunker Pants are available in duck or rubber.

We'll be glad to send you free literature.

Janesville APPAREL CO.
JANESVILLE, WISCONSIN



FOR EASY AIRTIGHT FIT and COMPLETE VISIBILITY
use
E&J CLEARSEAL MASKS

CRYSTAL PLASTIC CUP (so scientifically contoured it would be airtight if used alone) plus REMOVABLE INFLATED FACE CUSHION (for instant seal without discomfort).

EASY TO USE
EASY TO CLEAN
ADULT, CHILD & INFANT SIZES

for details write to
E & J MANUFACTURING CO.
Dept. 522-9, Burbank, Calif.

Demonstration at public gatherings and talks on how radio works in the fire service to the advantage of the taxpayer can make for better public relations. We are constantly finding new uses for radio in our department, all of which give better service to the people of our city.

R. L. Woolard, Chief, Norfolk, Va.: About ninety-two per cent of our vehicles are equipped with two-way radio. We expect ultimately to be fully equipped.

We use radio in a "turn-around" system.

Fire control and extinguishment can be improved by sending in additional alarms when necessary on arrival at the scene of fire. Companies are placed in commission while returning from alarms of fire.

We are conducting an extensive inspection of homes in our city.

We would like to go into each home and actually sell the idea of home fire prevention to every home owner and renter.

Our firemen will be turned into super salesmen and sell fire protection from house to house. Our sales message will contain turnover charts like those employed by office machine salesmen. Firemen will use the same acceptable tricks and subtle techniques used by door to door peddlers. This will be no flash in the pan stunt. It is one of the biggest, most carefully worked out sales programs ever originated.

This program has been sold to key officers in the department, chiefs and captains. They in turn trained the firemen in their respective districts. In the fire stations two-man teams practice being salesmen, while their buddies play the part of members of a family who love to heckle salesmen. With practice the approach, the entrance giving the spiel, reading the turn-over chart aloud and the exit, were smoothed to perfection. Being sold on their product, fire prevention, the firemen hope to form one of the most formidable sales forces ever to hit a city the size of Norfolk.

Having the firemen out in the various neighborhoods, ringing the doorbells will in no wise jeopardize the efficiency of the department. The driver stays with the two-way radio equipped apparatus and one blast from the siren brings the men back to the apparatus on the double.

We hope the huge house by house, family by family, home fire prevention program will gain momentum every month. It will take some time to complete it, but we hope policies of prevention will eventually be sold to 230,000 residents.

Fred J. Wells, Chief, Fargo, N. D.: About eighty per cent of our apparatus are equipped with two-way radio. Additional units are on order to bring us up to 100 per cent.

We use radio in a "turn-around" system.

To broaden and improve fire department inspections I would suggest a wider adoption of the methods used by Rockford, Ill., where complete engine companies make inspections while still in service by and through the use of radio.

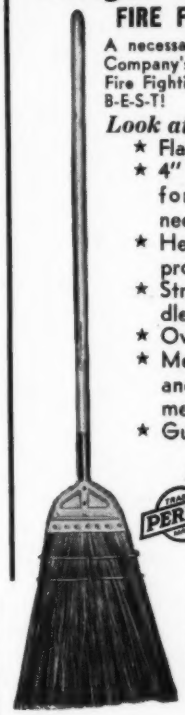
W. H. Ferguson, Chief, Edmonton, Alta.: About sixty per cent of our vehicles are equipped with two-way radio. We hope ultimately to have all our apparatus so equipped.

"Ranger" FLAME-PROOFED FIRE FIGHTING TOOL

A necessary part of every Fire Company's equipment is the Fire Fighting Broom. This is the B-E-S-T!

Look at these features:

- ★ Flame Proofed Fibres
- ★ 4" Metal Collar reinforcement around neck
- ★ Heavy gauge rust-proof metal Head
- ★ Strong hickory handles
- ★ Overall length 60"
- ★ Meet U. S. Forestry and City Fire Department Specifications
- ★ Guaranteed



Look for the TRADE PERFEX MARK *trade mark.*

"25 Years of Quality Fibre Brooms"
Insist on PERFEX (Reg. U. S. Pat. Off.). If your dealer cannot supply you, write, giving your dealer's name, to:

PERFEX
41 Dinsmore Place, Brooklyn 8, N. Y.

Firemens BADGES by EVERSON-ROSS

Write for folder
EVERSON-ROSS
88 CHAMBERS ST NEW YORK 7 N Y

Here's a revolutionary piece of equipment that will double your department's efficiency and protect your men from excessive strain and exhaustion. One man can carry the ELKHART HOSE CONTROL, put it on a line and operate the nozzle with speed and safety. Even more than that—

- It will stand alone—on ice, snow, roofs, gravel or concrete—without any whip or back-lash.
- It takes the place of a monitor nozzle.
- It releases manpower for other duties.
- It's an excellent carrying device on a moving hose line—three men can move forward, with a charged line, open under pressure. With hose line attached and nozzle closed, one man can easily move it to another position.
- It's one of the greatest fire-fighting tools ever devised—of particular value to undermanned departments.

Shown in action with the Elkhart Hose Control is the Elkhart J-200 Mystery Nozzle—a fog nozzle capable of discharging up to 475 gallons per minute, set at 30° fog, with 125 pounds nozzle pressure. Its huge output provides an enormous blanket or wall of solid fog.

ELKHART BRASS MFG. CO., Inc.

1902—FIFTY YEARS OF FIRE FIGHTING PROGRESS—1952

ELKHART, INDIANA

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SEPTEMBER, 1952

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Morning Pride Mfg. Co.	801
Motorola, Inc.	771
Oberdorfer Foundries, Inc.	790
Onan & Sons, Inc., D. W.	799
Pacific Marine Supply Co.	778
Perfex	803
Portable Light Co., Inc., The	784
Potter Fire Escape Co.	773
Powhatan Brass & Iron Works	791
Pyrene Mfg. Co.	785
QRS Neon Corp.	799
Radio Apparatus Corp.	775
Radio Corp. of America	780
Randolph Laboratories, Inc.	772
Rockwood Sprinkler Co.	738
Russell Uniform Co.	794
Scott Aviation Corp.	777
Seagrave Corp., The	745
Smith & Co., D. B.	741
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Sterling Siren Fire Alarm Co., Inc.	797
Ward LaFrance Truck Corp.	Inside Back Cover
Zierden Co.	799

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It was 8:40 A.M. when the first call came in, reporting this recent Brooklyn blaze. In a matter of minutes, Ward LaFrance pumpers were operating full stream at the scene of the fire.

This kind of split-second performance —plus the ability to operate under a wide range of conditions—have made Ward LaFrance America's most dependable pumpers. For more than 30 years, they've been a familiar sight on the nation's fire-fighting scene.

Why not call on Ward LaFrance to help modernize your community's fire-fighting equipment. Send for new Bulletin describing latest Ward LaFrance pumpers.

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Pump is 3-stage, series parallel, centrifugal with capacity of 500 gpm at 150 psi.

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SAFER CONTROL IN TRAFFIC — Start faster. Positive control permits greater speed. Avoid accidents because 4-wheel-drive assures superior steering.

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